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Advanced Accounting

Principles of Auditing

Case Problems in Auditing

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ELEMENTARY ACCOUNTING

Third Edition



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PREFACE

In the prefaces to the first two editions of this book it was stated that "accounting, like the social order of which it is a part, is constantly undergoing change and development." This statement, true yesterday, is impressively true today. The changes occurring are not changes in the fundamental truths of accounting but changes in the procedures by which these truths are studied, changes in the relative emphases to be given to the materials of accounting study, changes in the matter of terminology and statement construction, and changes occurring in the amount of attention given to the important role of the accountant and accounting information in the decision-making facets of business enterprise.

Not only has the third edition of *Elementary Accounting* been brought completely up to date; every effort has been made to achieve the following objectives:

1. To present the materials for an intensive, undergraduate one-year college course in the principles of accounting.
2. To present these materials in language that is simply and interestingly written and understandable.
3. To present the principles of bookkeeping and accounting in a well-planned arrangement of carefully selected materials. The supporting discussion should be inclusive, thorough, and well illustrated. The modern setting should predominantly govern the point of view.
4. To present a wide range of tested and realistic problems carefully related to the chapters to which they apply. A sufficient supply of satisfactory problems of progressive difficulty should be provided to serve the needs of classroom demonstration purposes and for work to be completed outside of class. There are 305 problems in the book.

As in earlier editions, the approach to the study of accounting in this edition is made through the balance sheet. The *use* aspects of financial statements are emphasized from the beginning. The recording process—by using the journal and ledger—is introduced quickly and formally in Chapter 3. Concurrent with the development of the recording or procedural

aspects of accounting, a definite endeavor has been made to direct an increasing amount of attention to the analytical, interpretative, and managerial aspects of accounting. Problems 9-1 and 9-2, pages 177–178, are examples of this thinking expressed in problems of the text.

Throughout the book a definite endeavor has also been made to support discussional materials with answers to "why" questions and with expositions of accounting theory relevant to them. This emphasis upon theory is desirable because all accounting procedures and the rules of "good practice" develop logically from the foundations of theory. To the student, new situations are more easily and effectively dealt with when they are examined in the light of accounting theory. Significantly, this emphasis on theory is summarized in the final chapter of the book, Chapter 31, an Introduction to Accounting Theory.

Elementary Accounting uses procedures and methods that are modern —some of which were significantly introduced in the second edition of this book. The work sheet, introduced early in the book (Chapter 5), is utilized constantly. Sales and purchases discounts are handled as deductions from sales and purchases, respectively. Prepaid expenses are current assets. The all-inclusive statement of income is used constantly. Stress is laid steadily upon the problems of correct accounting valuations with concurrent stress upon the effect of these valuations upon the financial statements. The income statement receives an increasing amount of attention as the book develops and, in Chapter 28, the dominant position of this statement is specifically stressed. Modern terminology is used throughout the book; *retained income*, for example, is used in place of *earned surplus*.

In so far as specific materials are concerned, the recording process is introduced more rapidly than in preceding editions, multiple-column records and control accounts appear together, and the materials on negotiable instruments appear in a single chapter. In the interest of greater clarity and discussion, the materials on adjusting entries, corporate accounts, depreciation and manufacturing accounting, especially, have been completely rewritten. Following an expanded discussion of financial statements, their construction, use, and interpretation (Chapters 28, 29, 30), a new and distinctive chapter on accounting theory concludes the book.

Six practice sets, completely rewritten and shortened, accompany the text, two sets for each type of business: single proprietorship, partnership, and manufacturing corporation.

Elementary Accounting is rather comprehensive as to content. But, being comprehensive, the book should serve students well—students who expect to enter the profession of accounting and the more numerous students whose future careers in business require them to have a good, general understanding of the principles of accounting. To the latter group, this comprehensiveness is an important feature because the majority of students in elementary accounting classes do not expect to become account-

ants and their contact with the subject may well be limited to their introductory text. *Elementary Accounting* is intended to be a book not only modern and impressive as to content but flexible in use; instructors should find it easy to select materials according to the needs of their classes and the relative emphases to be given to the bookkeeping, theoretical, managerial, or other aspects of accounting; or to specific topics.

The production of *Elementary Accounting*, third edition, has involved, of course, a genuine indebtedness to all who have assisted me, directly and indirectly, in its preparation. To those who gave valued advice and criticism for the second edition, there must now be added the names of those who gave important recommendations and whose contributions to the third edition require appreciative acknowledgment: Professors Wilber C. Haseman, Evroul S. Germain, and Jane S. Gammardella, all of Syracuse University; John A. Clinkenbeard of Western Reserve University; Albert Slavin of Northeastern University; and Christian Oehler of Fordham University, whose assistance was especially substantial and scholarly. Acknowledgment is also respectfully made to the American Institute of Certified Public Accountants for the right to reprint excerpts from their copyrighted publications.

A. W. J.

New York University
July, 1956

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Chapter 1 INTRODUCTION TO ACCOUNTING

By virtue of the inherent nature of the society in which we live, the development, purchase, sale, and handling of private wealth inevitably involve human financial relationships. As soon as these relationships are created and factually expressible—in terms of money—the financial values of the facts involved must be established and recorded. Property values and the rights of individuals against property values must be determined. When funds of any kind are to be distributed, the proper values and rights to be observed in the distribution must be fixed. These procedures apply not only to private business but also to nonprofit organizations and to federal, state, and local governmental bodies as well.

If these various kinds of organizations are to have the opportunity of deriving the maximum benefits from the funds employed by them and if, also, there is to be effective personal responsibilities for these funds, it is important for the funds of these organizations to be wisely managed and responsibly controlled. As one of the fundamentals of any program of effective management, records for "control" purposes are required. These records are *accounting records* containing financial information by which the management of a business may know with respect to the business for which it is responsible:

1. What incomes have been earned
2. What costs have been incurred in earning these incomes

} over a specific period of time.

And also

3. What financial properties are owned
4. What financial obligations are owed
5. What the financial interests of the owners are

} as of a specific date.

For any private business, the first two items are described in the "statement of income." In this statement the incomes of a business are systematically listed and costs of income deducted, the excess of total

income over total costs being called "net income." The last three items are described in the "balance sheet" of a business.

On the basis of this introductory discussion it may be stated that the *broad field of accounting* is the systematic recording, summarization, reporting, interpretation, and verification of the financial facts of a business. This broad field is described in some detail in the following section of this chapter.

Definitions of Accounting

Accounting is the master plan for the systematic and significant recording of the effects of business transactions upon the money values of a business. As one phase of this master plan, the actual work of recording these facts in the accounting records (or "books") of a business is known as bookkeeping.[1] A bookkeeper, therefore, records the financial facts of a business in conformity with a prescribed accounting plan.

Accounting is the effective summarization, reporting, verification, interpretation, and analysis of the financial facts of a business for these purposes:

1. To state fairly, and explain, the amount of net income earned by a business over a specified period of time. This is done through the "statement of income" or, as it is alternatively known, the "profit and loss statement."
2. To state fairly, and explain, the properties and property rights of a business as of a specific date. This is done through the financial statement generally known as the "balance sheet."

The statement of income and the balance sheet are prepared primarily for the information and use of the management and the owners of a business. These statements are useful not only as financial summaries of concluded transactions but also as bases for developing *plans* for managerial and investor *action*.

Accounting is a service whose financial reports enable managements to more effectively *plan* and *measure* and *control* the operations and financial solvency of the businesses for which they are responsible. These reports furnish data which make it possible not only to measure and appraise the results of past operations but also to plan for the improvement of future operations.

Accounting, in summary, may be defined as the collection, compilation, and systematic recording of business transactions in terms of money, the preparation of financial reports, the analysis and interpretation of these

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[1] "Bookkeeping—the analysis of enterprise transactions and the translation of these events into classified entries in a system of accounts."—A. C. Littleton, *Structure of Accounting Theory* (American Accounting Association, 1953), p. 194.

reports, and the use of these reports for the information and guidance of management.

The American Institute of Accountants has defined *accounting* in the following language: "Accounting is the art of recording, classifying and summarizing in a significant manner and in terms of money, transactions and events which are, in part at least, of a financial character, and interpreting the results thereof."[2]

Another definition of accounting appears on page 12. This definition is more specific because it incorporates the terms "asset," "liability," and "proprietorship" (as defined in Chapter 2).

The Functions of Accounting

One of the prime functions of accounting is to provide management with financial information and guidance—presented in understandable financial statements and records. This information and guidance should

summarize, effectively, (1) the past operations of a business for, say, a month, three months, six months, or a year, as the case may be, and (2) the financial condition of a business;
permit the amount of income taxes to be computed accurately;
permit management to measure the effect and relative fulfillment of the operating plans which it prescribed and administered;
effectively aid management to take prompt remedial measures, when and where necessary, for the improvement of business operations and financial condition; and
be of substantial assistance to management in its planning of future operations.

Today, more than ever before, the ability of a business to earn a net profit and to protect the financial interests of its owners and creditors depends upon efficient business administration. In support of these objectives, the information provided by a properly designed and operated system of accounting is of fundamental importance. It is through the medium of accounting reports that managements may appraise the performance of those upon whom responsibility has been placed. It is through accounting reports that managements may control operating efficiency and financial solvency. And it is through accounting reports that plans may be made for the improvement of future operations. Accounting, so utilized, is constructive. It is constructive because it provides means for certain effective management controls: control of finances and control of costs through planning procedures, effectively administered. Indeed, the financial statements of private business have become so important that, without them, the machinery of investment, credit, and taxation would almost certainly be fatally impaired.

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[2] *Accounting Terminology Bulletin No. 1* (1953), p. 9.

Conversely, it is through accounting reports that managements themselves may be appraised by the owners who have delegated the functions and responsibilities of management. In these days of large-scale business, of the widespread use of the corporate form of business organization, and of scattered and absentee ownership, the stewardship of management is of conspicuous importance. This is but to say that intelligent investment is primarily and fundamentally dependent upon the essential information provided by the financial statements of accounting.

The management of a business—from the owner-manager of a small business to the management of a large corporation—is interested in the following kinds of primary information:

1. What properties are owned.
2. What debts are owed.
3. What the business is worth in terms of invested capital.
4. What the net income of a business has been for a specified period of time.
5. How the net income of the business was earned.

That this information is important to management should be manifest. It is information which is, and must be, contained in the records of a business. These records are reservoirs of *needed* information—needed because the information is essential to good business management. A businessman must know where his business stands today and what it has done in the past if he is to formulate managerial programs which promise to be sound and profitable for the future. His plans and decisions depend rather substantially upon the production of periodic financial statements—primarily the balance sheet and the statement of income—based upon adequate *records*. These accounting records are indispensable to the continued soundness and profitability of any business, be it large or small. When the accounting records of a business are accurate and adequate they are, in and of themselves, primary indicia of good management.

Finally, the establishment or proof of business facts is essentially a matter of *records*. In the event of fire or other catastrophe, the lack of adequate records—as well as the lack of protection for these records—may make the resumption of business operations costly, difficult, and sometimes even impossible.

The five kinds of primary information described above have other facets of contributory importance:

1. Where more than one owner is interested in the net income of a business, the net income of that business must be accurately determined before this income can be fairly apportioned and before, also, the individual and collective interests of these owners can be fairly established.
2. Where income tax returns must be prepared and substantiated, accurate and detailed accounting information is essential. This is primarily a matter of records.

3. When a business is subject to federal or state regulation, as are railroads and public-utility companies, the proper determination of accounting values is generally a prerequisite to intelligent and successful managerial administration and governmental regulation.

In broad outline the functions of accounting may be summarized as follows:

1. It serves as an instrumentality for planning and control to the end that management may seek not only to preserve the capital which has been entrusted to it but also may be enabled to use that capital profitably.
2. It presents, classifies, and evaluates the properties which are controlled by a business; and it presents, classifies, evaluates, and explains the periodic changes occurring in the financial claims which exist against these properties.

The functions of accounting, as described on pages 3–5, are functions of importance to actual and prospective creditors and owners. In a broad sense, they are also socially important because of their effect upon the public welfare.

The Areas of Accounting Specialization

Accounting, like other professions, has areas of specialization. Distinct fields of accounting are in existence today, notably the following:

1. Commercial Accounting. All businesses which exist for profit employ commercial accounting. Each of these businesses seeks to determine, periodically, the amount of net income earned over an accounting period and to determine also its financial condition as of a specific date.

This type of accounting is also used by nonprofit organizations such as hospitals, churches, and chambers of commerce. The interest of these organizations in accounting procedures is one whose purpose is not that of determining, periodically, the amount of "profit" earned but, rather, whose purpose is that of controlling their costs of operation, i.e., that of keeping these costs within the limits prescribed by their available income. Periodically, too, accounting procedures are useful to them for the purpose of determining their respective financial positions.

2. Cost Accounting. The general objective of cost accounting is to determine the cost of the goods which a business has manufactured for purposes of sale. The determination of these costs is often a complex and difficult procedure.

In the process of determining manufacturing costs, the skilled industrial accountant seeks facts. He endeavors to interpret the facts at each point of cost creation; and he endeavors to assemble cost information which, when placed in the hands of the manufacturing management of a business, will assist that management in controlling costs at each step of the manu-

facturing process. In the hands of the skilled accountant, procedures like these are invaluable in establishing forecasts of profits well in advance of completed financial statements showing actual profits.

3. Income Tax Accounting. The objective here is essentially the preparation of federal and state income tax returns. The field of income tax accounting requires the accountant to have a special knowledge of the laws and regulations which underlie the assessment and determination of income taxes. Taxes should be fairly determined. Many business men find it worth while to consult with their accountants as to the income tax effects not only of completed transactions but of those which are contemplated as well.

4. Governmental Accounting. This is a specialized type of accounting which applies to municipalities, states, and other governmental bodies. This particular field of accounting has arisen because (a) the administration of public business is different from that of private business, and (b) the character of the information to be recorded is different.

5. Auditing and Investigations. This is a highly specialized field of accounting which centers upon the work of public accountants in examining statements of income and of financial condition and of rendering a professional, independent opinion upon these financial statements as to their fairness. Allied to auditing is the work of investigations which may call for the valuation of a business for purpose of sale, merger, new stock issues, and so on, or for a critique of the efficiency with which a business is being administered.

6. Budgeting. This area represents the planning and control of the operations of a business, a complex and systematic procedure which requires a thorough knowledge of accounting. The building and subsequent serviceability of a budget is a field of accounting service whose objective is to guide, intelligently, the management of a business by setting up *in advance* a financial program of estimated operations. Subsequent actual financial results are later compared with budgeted, i.e., desired results.

7. Accounting Systems. The adaptation of a system of accounting to the needs of a particular business is the field of accounting systems. Businesses are not alike in the kind of information required. They must be individually fitted, therefore, with the kind of accounting systems which are appropriate to their needs. While system building is a distinctive field of accounting, it is an area of work which is usually administered by the professional public accountant rather than by accountants specializing in system building alone.

The Importance of Accounting

Modern accounting has often been called the language of business. Its professional responsibility is that of applying a thorough knowledge of

the theory of accounting—i.e., generally accepted principles of accounting—to the practical field of business in order that income and financial position may be stated fairly. These "accepted principles of accounting" are those which have stood the test of time and which, in an evolutionary process, represent the best practices of accounting.[3] When they have not been prepared according to accepted principles of accounting, the financial statements of a business cannot be relied upon. They are not reliable for reporting the annual net income of a business, for comparing annual net incomes, for making comparisons with other lines of business, or for fairly showing the financial condition of a business. As stated on page 3, the financial statements of business have become so important today that, without them, the machinery of investment, credit, and taxation would almost certainly be fatally impaired.

The allocation of the revenues and costs of a business to individual accounting periods is a procedure of fundamental importance to the successful preparation of financial statements. Some of the most important of these problems of allocation are as follows:

1. Matching costs and revenues.
2. Allocating the costs of productive facilities to future fiscal periods and to the production of future goods.
3. Allocating joint costs to individual products.
4. Determining what costs shall be carried forward to future fiscal periods.
5. Determining the method of valuation to be used for an inventory and for the cost of goods which have been sold.

From the discussion of the foregoing pages, it should be apparent, in a more or less general way, that the study of accounting should be worth while not only to the prospective accountant but also to the prospective businessman who does not intend to follow the profession of accounting. Business executives, professional men, bankers, creditors, investors, and many other persons find a knowledge of accounting very useful in understanding the values and limitations of financial statements and in employing these statements for the effective administration of their individual business affairs. No businessman or investor is well equipped unless he understands accounts and is able to utilize accounts and accounting information for the control and administration of his own business or investment program. Because it cuts across all the fields of business administration, accounting has a peculiar and fundamental importance in every area which is a segment of economic activity in general.

[3] See also Chapter 31, "Introduction to Accounting Theory."

Chapter 2 FUNDAMENTAL CONCEPTS

The Statement of Financial Condition (i.e., The Balance Sheet)

In Chapter 1 it was pointed out that a businessman wishes to know, among other things, the financial condition of his business as of a given date and also the amount of net income which his business has earned over a given period of time ending with the date of the balance sheet. With these two things in mind, assume that Roy F. Young is in business as a sole proprietorship; and that, on December 31, 1957, his business

Owns Various Properties Costing	$68,000.00

and that

The Claims against these Properties are those of:	
Various Creditors	$18,000.00
Himself, as Owner	50,000.00
	$68,000.00

This is obviously a statement of financial condition. While this statement gives some information as to the financial facts of the business, it is an unsatisfactory statement because it does not give information as to

1. the kinds of properties owned and the valuations attaching to each of these properties, or
2. the character of the creditor claims and the valuations attaching to each of these claims.

The statement does not describe the individual properties owned by the business. It merely states that their group valuation is $68,000.00. The statement does not give the details of the two groups of claims. It merely states that their group valuation is also $68,000.00.

A better statement of financial condition for the business of Roy F. Young on December 31, 1957, would have been as follows:

Roy F. Young

BALANCE SHEET, DECEMBER 31, 1957

The Properties Owned Are

Cash		$15,000.00
Accounts Receivable:		
Birchum & Company	$1,000.00	
F. A. Collier & Son	3,000.00	
John A. Pace Company	4,000.00	8,000.00
Merchandise Inventory		10,000.00
Store Equipment		2,000.00
Delivery Equipment		4,000.00
Building		25,000.00
Land		4,000.00
		$68,000.00

The Claims against These Properties Are

Accounts Payable:	
Carl A. Adams	$ 1,000.00
Cole & Day, Inc.	2,000.00
	$ 3,000.00
Notes Payable to Bank	5,000.00
Mortgage Payable, due July 1, 1967	10,000.00
	$18,000.00
Roy F. Young, Owner	50,000.00
	$68,000.00

This statement is a clearer report upon the financial condition of the business of Roy F. Young. The properties owned and the financial claims against these properties are individually described as to kind and as to valuation. It will be observed that the cash on hand, $15,000.00, is substantially in excess of the amount needed to make immediate payment of the accounts and notes payable, $8,000.00. The accounts payable and notes payable are due for payment within the near-term future. The real-estate mortgage, however, is not due for payment until July 1, 1967. The mortgage payable, unlike the other obligations of the business, is secured by the pledge of specific property (i.e., building and land).

It will be observed that this statement significantly distinguishes between the claims of creditors of the business and the claim of Mr. Young, the owner. In this connection it will be noted that Mr. Young's interest in the business, $50,000.00, is almost three times the total of the claims of creditors, $18,000.00.

It is possible to point out further items of interest but, for our immediate purpose, this is not necessary. The important thing to observe is the superiority of the second statement over the first. The second statement is better because of the information which it presents in reasonable, significant detail.

The Statement of Income

A somewhat similar situation exists with respect to the problem of income. For example, assume that when Roy F. Young began business on December 31, 1956, his investment in the business was $40,000.00; and that twelve months later, December 31, 1957, his interest in the business was $50,000.00. Would it be proper to then conclude that the business of Mr. Young had earned a net income of $10,000.00 for the year?

Investment, December 31, 1957	$50,000.00
Investment, December 31, 1956	40,000.00
Net income (?) for the year	$10,000.00

If Mr. Young had started in business with an initial investment of $40,000.00 and if, later in the year, he had made an additional investment of $10,000.00 in the business, it would be wrong to conclude (from the above calculation) that $10,000.00 of net income had been earned during 1957. It is possible, too, that $15,000.00 might have been earned and that Mr. Young might have withdrawn $5,000.00 of this income from the business—thus leaving only $10,000.00 of the year's net income in the business. It is even possible for the $10,000.00 increase in Mr. Young's investment to be explained as being the difference between an additional investment in the business of $20,000.00 and a net loss of $10,000.00 for the year. The above type of calculation, therefore, is *not* satisfactory. It does not produce a value for net income which can be relied upon as accurate. The value for net income, further, is one which does not reveal *how* the net income of the year, if any, was earned.

Suppose, instead, that the year's history of the business had been presented as follows:

Merchandise was sold for		$100,000.00
The cost of this merchandise was		57,000.00
Leaving a gross profit of		$ 43,000.00
Expenses were:		
Selling expenses	$10,000.00	
General expenses	4,000.00	
Wages and salaries	16,000.00	30,000.00
Leaving a net profit on operations of		$ 13,000.00
Add Profit earned on sale of land		3,000.00
Net income		$ 16,000.00
Interest in the business, December 31, 1956		40,000.00
		$ 56,000.00
Less Cash withdrawn from the business in 1957 for personal use		6,000.00
Interest in the business, December 31, 1957		$ 50,000 00

A statement of this kind reveals not only the amount of net income earned during the year but also the costs of earning this income and, fur-

ther, how the net income of the business was disposed of. The following specific information may be noted:

1. The volume of sales
2. The cost of sales
3. The gross profit
4. The expenses
5. The profit from the major operation of the business, i.e., merchandising
6. The income earned from nonmerchandising activities
7. The net income earned from all transactions of the business
8. The owner's interest in the business, December 31, 1956
9. The funds withdrawn from the business by the owner during 1956
10. The owner's interest in the business, December 31, 1957

This second financial statement is superior to the first one because it provides accurate information in significant detail—it shows not only the amount of net income but also *how* the net income of the year was earned.

One of the primary responsibilities of the management of a business is that of maintaining a satisfactory relationship between income and the costs incurred in the earning of this income. If a business is to operate *profitably*, the total cost of operating a business *must* be contained within the limits set by available income. Costs, individually and in total, should be watched continuously for assurance that the dollar amounts involved are reasonable and authorized, and that full value has been received for each dollar expended. This *must* be done in the interest of the owners of private business. It should be done for nonprofit organizations. In the interest of taxpayers, it assuredly should be done for governmental spending units. In all cases the financial *control* aspects should be made effective by having established financial objectives against which to measure performance.

Definitions

At this point it is well to pause briefly for the purpose of introducing and defining some of the terms commonly used in the practice of accounting. (Most of these terms are used in the balance sheet on page 15.)

Assets. An asset is anything of value owned, an item of wealth satisfactorily measurable in dollars and useful in carrying on a business. Legal title to an asset generally resides in the purchaser of the asset. While this is usually the case, there are some exceptions. For example, an automobile may be purchased on the installment plan of payment, the contract of purchase specifying that title to the automobile shall pass only when all payments required by the contract have been made. In cases of this kind, the property is considered to be an asset of the buyer rather than of the

seller. This is so because—in a business sense—the asset is looked upon, constructively, as the property of the buyer, and because the reservation of title by the seller is simply a protective device to cover his unpaid financial interest in the property sold.

Assets come into the possession of a business by the acts of investment, purchase, conversion, gift, and discovery.

Assets vary in their nature. They may be tangible or intangible, or they may consist of money claims against others. Tangible assets, for example, are cash, merchandise, office equipment, land, buildings. Intangible assets are properties like formulas, franchises, patents, and goodwill. Money claims are those like accounts receivable, notes receivable, and securities. All of these assets have value; and against them exist the claims or property rights of those who have financial interests in these assets. One of the objectives of accounting is to prepare for any given business at any given data a list of the assets owned and the valuations which attach to each of them.

Accounts Receivable. In its narrow sense the term "accounts receivable" represents the indebtedness of *customers* for merchandise or services billed to them on open account. More broadly the term represents the open account indebtedness of customers or other debtors for charges of any kind.

Notes Receivable. Promissory notes and drafts received from debtors are the notes receivable of a business.

Liabilities and Equities. Anything of economic value is or will be claimed by someone. Therefore, since the assets of a business have economic value, it is obvious that claims must exist against them. Such claims are known as "ownership claims" or as "rights against property" or as "property rights" or as "equities." The claims of the owners of a business are called "proprietorship" or "net worth," while the claims of those who are not owners are called "liabilities." More specifically, liabilities are simply the debts which are owed by a business. They are legally enforceable obligations under which a business is required to deliver—for value received—considerations (usually money) to creditors at fixed or determinable future dates. Until they have been paid, liabilities are legally superior to any and all claims of proprietorship.[1]

By way of expanding the definition, a liability is a legal obligation to pay a sum of money of fixed or determinable amount;

deliver real or personal property;
perform services; and
permit the use of property.

} These three types of liabilities are expressed in terms of money on the records of the debtor.

[1] In terms of these new definitions, the definition of *accounting* on page 3 may now be made more specific: *Accounting* is the master plan for the systematic, classified, and significant recording of the financial effects of business transactions upon the assets, liabilities, and proprietorship of a business, and of interpreting the results thereof.

The dollar amount of each of these liabilities is that part of the total dollar value of the original consideration for which the debtor must yet deliver consideration in exchange.

Some liabilities come into existence quickly as, for example, when merchandise is purchased on credit terms. Other liabilities come into existence slowly and grow in amount as time goes by—interest payable on a loan, for example. This growth in amount, proportionate with the lapse of time, is considered by accountants to apply also to such items as real-estate taxes, the liability for taxes payable being considered as increasing in equal monthly amounts, one-twelfth each month. In contrast, the legal view is that real-estate taxes payable become a full liability on the particular day on which taxes become a lien on real estate.

In the balance sheet of a business care should be taken to separate clearly the debts of a business from financial claims which are purely proprietary in nature. This separation is significant because liabilities have a legal preference over the claim or claims of the owner (or owners) of a business. When a business is being liquidated, for example, the liabilities of a business must be paid in full before it is proper to make a liquidating payment upon a proprietary claim.

Unsecured liabilities are not claims against particular assets but against all unpledged assets generally. For instance, in the statement on page 15, merchandise creditors have a $3,000.00 claim, not against the specific asset merchandise, but against the total of unpledged assets generally. This is true even though these two creditors may have furnished $3,000.00 of the $10,000.00 of merchandise which is currently on hand. In making shipment of this merchandise, the vendors automatically made an unconditional transfer of title to Roy F. Young. In consequence of this transfer of title, these creditors have no greater claim against the asset merchandise than against any other unpledged asset.

By way of contrast, the real-estate mortgage of the same statement is a secured claim. The mortgage of $10,000.00 is an equity which, by written agreement, is secured by the pledge of the specific asset real estate (i.e., building and land).

Accounts Payable. In its narrow sense the term "accounts payable" represents liabilities which have been created by the open account purchase of merchandise and supplies. More broadly the term represents all invoices for merchandise, supplies, services, and so on, which are due for payment within a period of twelve months.

Notes Payable. Notes payable are the ordinary promissory note and draft liabilities of a business. Notes payable are usually issued in favor of one or more banks or other parties for the purpose of borrowing money. In some lines of business, however, it is common to find notes also issued in favor of merchandise creditors (i.e., those notes payable more commonly known as trade acceptances).

Statement of Income (*also called the profit and loss statement*). The function of this statement is to report the amount of net income which has been earned by a business over a specified period of time and to explain, also, how this income was earned. The statement of income must be prepared periodically so that the success of a business may be measured; and it must be prepared, also, in order to help the management of a business plan for the future, and in order to help management decide what amount of income shall be used as a base for the calculation of taxes on income.

Balance Sheet. This statement is a report upon the final condition of a business. It is divided into two major parts, each of which is equal to the other. In one part the assets are listed, valued, and totaled; in the other the equities are listed, valued, and totaled. The balance sheet always applies to a specific date.

In order to make the balance sheet more meaningful, the assets of a business are generally classified into at least two groups:

1. Current Assets. Current assets are cash, and other assets which, within the next twelve months or operating cycle of normal business operations, are expected to be (a) realized in cash or (b) used up in the production of income.

2. Fixed Assets. Fixed assets are those tangible assets used in the operation of a business, assets of relatively long life and which are not intended to be sold. Machinery and buildings are examples of fixed assets.

A business may have assets which are neither current assets or fixed assets. These miscellaneous assets should be classified in the balance sheet under titles appropriate to their nature. One example of these miscellaneous assets is trade-marks and trade names—assets which are generally classified as "intangible assets" on the balance sheet.

The liabilities of a business are generally classified into at least two groups:

1. Current Liabilities. Current liabilities are those liabilities which are due for payment within one year of the date of a balance sheet.

2. Long-Term Liabilities. Long-term liabilities are liabilities which are due for payment after one year from the date of a balance sheet.

Net Worth; Proprietorship; Owner's Equity; Capital. These terms all have the same meaning. They represent the proprietary interest (or equity) of the owner or owners of a business. They do not include possessions of the owners outside their respective businesses.

The proprietary interest in a corporation is commonly called *Stockholders' Equity* or *Stockholders' Interest* or simply *Capital.*

The various proprietary interests in single proprietorship, partnership, and corporate businesses may be illustrated in the following balance sheet excerpts:

Single proprietorship

Net Worth:

John Doe, Capital $100,000.00

Partnership

Net Worth:		
J. C. Allen, Capital	$50,000.00	
A. J. Brown, Capital	30,000.00	
E. L. Carey, Capital	20,000.00	100,000.00

Corporation

Stockholders' Equity:		
Capital Stock, $100.00 par	$100,000.00	
Retained Income	25,000.00	125,000.00

The corporate net worth of $125,000.00 means that $100,000.00 of capital was invested in the corporation by its owners, the stockholders; and that another $25,000.00 of capital was accumulated by profits earned but not distributed (as dividends) to stockholders.

The Balance Sheet Is Always in Balance

Since assets are always matched by an equal amount of claims against them, it is clear that

$$\text{Assets} = \text{Liabilities} + \text{Net Worth}$$

For a solvent business this is always true. There can be no change in the total assets of a business without a corresponding change in the total of the claims (i.e., equities) or property rights existing against these assets. The *equality* of the balance sheet equation cannot be disturbed by the transactions of a business. To illustrate this point, let us consider the effect eight new transactions would have had upon the following balance sheet of the business of Roy F. Young.

Roy F. Young

BALANCE SHEET, DECEMBER 31, 1957

Assets

Current Assets:		
Cash		$15,000.00
Accounts Receivable:		
Birchum & Company	$1,000.00	
F. A. Collier & Son	3,000.00	
John A. Pace Company	4,000.00	8,000.00
Merchandise Inventory		10,000.00
		$33,000.00
Fixed Assets:		
Store Equipment	$ 2,000.00	
Delivery Equipment	4,000.00	
Building	25,000.00	
Land	4,000.00	35,000.00
		$68,000.00

Liabilities and Net Worth

Current Liabilities:		
Accounts Payable:		
Carl A. Adams		$ 1,000.00
Cole & Day, Inc.		2,000.00
		$ 3,000.00
Notes Payable to Bank		5,000.00
		$ 8,000.00
Long-Term Liabilities:		
Mortgage Payable, due July 1, 1967		10,000.00
		$18,000.00
Net Worth:		
Roy F. Young, Capital		50,000.00
		$68,000.00

1. Roy F. Young invests additional cash, $5,000.00.

The asset cash is increased $5,000. Since the cash was placed in the business by Roy F. Young, his equity is increased $5,000.00.

This transaction illustrates the increase of an asset and a similar increase in the amount of the proprietor's equity.

2. Received check from Birchum & Company in payment of its account, $1,000.00.

The asset cash is increased $1,000.00 and another asset, the accounts receivable with Birchum & Company, is reduced $1,000.00.

This transaction illustrates the increase of one asset and a decrease of a corresponding amount in another asset.

3. Purchased merchandise on 60 days' credit from Dale & Son at a cost of $1,300.00.

The asset merchandise is increased $1,300.00. Since Dale & Son furnished the merchandise without requiring immediate cash payment, this particular merchandise creditor has a claim of $1,300.00.

This transaction illustrates the increase of an asset and a corresponding increase in a liability.

4. Issued a note payable, $1,000.00, to Carl A. Adams, in payment of an open accounts payable of similar amount.

Here a new liability is created to take the place of an old liability. The amount of money owed to Carl A. Adams remains unchanged but the character of the obligation owed has been altered. The liability of notes payable is increased by $1,000.00; and the liability of accounts payable to Carl A. Adams is reduced by the same figure, $1,000.00.

This transaction illustrates the creation (increase) of a liability and the decrease of another liability.

5. Sold land (costing $600.00) to York & Company for cash, $1,000.00.

Cash is increased $1,000.00; land is reduced $600.00. Total assets have been increased $400.00 by the profit realized on the sale. The proprietor claims that profit, hence the claim (equity) of Roy F. Young, is increased $400.00.

This transaction illustrates the increase of one asset, the decrease of another and a balancing increase in the amount of the proprietary claim of the owner.

6. Paid the mortgage payable, $10,000.00.

Cash is reduced $10,000.00; the liability for the mortgage indebtedness is extinguished.

This transaction illustrates the reduction of an asset and a reduction of equal amount in a liability.

7. Sold delivery equipment (costing $700.00) to F. A. Chester for cash, $400.00.

This transaction is similar to the fifth transaction except that a loss has been realized instead of a profit. Cash is increased $400.00; delivery equipment is reduced $700.00; and the proprietary claim of Roy F. Young is decreased by the loss of $300.00.

This transaction illustrates the increase of one asset, the decrease of another, and a balancing net decrease in the amount of the proprietary claim of the owner.

8. Roy F. Young withdraws $1,000.00 cash for his private use.

Cash is reduced $1,000.00 and the equity of Roy F. Young is also reduced by $1,000.00.

This transaction illustrates the reduction of an asset and a reduction of equal amount in the proprietary claim of the owner.

The balance sheet of Roy F. Young, after giving effect to these eight transactions (see pages 18–19), will be

Roy F. Young

BALANCE SHEET, DECEMBER 31, 1957

Assets

Current Assets:		
Cash		$11,400.00
Accounts Receivable:		
F. A. Collier & Son	$ 3,000.00	
John A. Pace Company	4,000.00	7,000.00
Merchandise Inventory		11,300.00
		$29,700.00
Fixed Assets:		
Store Equipment	$ 2,000.00	
Delivery Equipment	3,300.00	
Building	25,000.00	
Land	3,400.00	33,700.00
		$63,400.00

Liabilities and Net Worth

Current Liabilities:		
Accounts Payable:		
Cole & Day, Inc.	$ 2,000.00	
Dale & Son	1,300.00	
	$ 3,300.00	
Notes Payable	6,000.00	
	$ 9,300.00	
Net Worth:		
Roy F. Young, Capital		54,100.00
		$63,400.00

TRANSACTIONS	CASH		ACCOUNTS RECEIVABLE (*In total*)		MERCHANDISE INVENTORY		STORE EQUIPMENT		DELIVERY EQUIPMENT	
	+ *Increase* − *Decrease*	*Balance*	+ *Increase* − *Decrease*	*Balance*	+ *Increase* − *Decrease*	*Balance*	+ *Increase* − *Decrease*	*Balance*	+ *Increase* − *Decrease*	*Balance*
Balances, per balance sheet, page 15.		$15,000.00		$8,000.00		$10,000.00		$2,000.00		$4,000.00
1. Roy F. Young, invests cash, $5,000.00.	+$5,000.00	20,000.00								
2. Received check from Birchum & Co., $1,000.00.	+1,000.00	21,000.00	−$1,000.00	7,000.00						
3. Purchased merchandise from Dale & Son, $1,300.00.					+$1,300.00	11,300.00				
4. Issued a note payable to Carl A. Adams in payment of account, $1,000.00.										
5. Sold land for cash, $1,000.00. (Original cost, $600.00).	+1,000.00	22,000.00								
6. Paid the mortgage payable, $10,000.00.	−10,000.00	12,000.00								
7. Sold delivery equipment for cash, $400.00. (Original cost, $700.00.)	+400.00	12,400.00							−$700.00	3,300.00
8. Roy F. Young withdraws cash for personal use, $1,000.00.	−1,000.00	11,400.00								
Balances, per balance sheet, page 17.		$11,400.00		$7,000.00		$11,300.00		$2,000.00		$3,300.00

For the purposes of most balance sheets, it is usually unnecessary for customers' and creditors' names to appear in detail. Accordingly, the balance sheet of Roy F. Young would be

Roy F. Young

BALANCE SHEET, DECEMBER 31, 1957

Assets			*Liabilities and Net Worth*	
Current Assets:			Current Liabilities:	
Cash		$11,400.00	Accounts Payable	$ 3,300.00
Accounts Receivable		7,000.00	Notes Payable	6,000.00
Merchandise Inventory		11,300.00		$ 9,300.00
		$29,700.00		
Fixed Assets:			Net Worth:	
Store Equipment	$ 2,000.00		Roy F. Young, Capital	54,100.00
Delivery Equipment	3,300.00			
Building	25,000.00			
Land	3,400.00	33,700.00		
		$63,400.00		$63,400.00

As a matter of technical detail, our discussion may properly pause briefly for the purpose of directing attention to the heading of a statement of financial condition. A proper heading is illustrated in the balance sheet above. Note that this statement of financial condition refers to a specific date.

In the illustrative balance sheets on pages 15 and 17, accounts receivable and accounts payable were detailed for teaching purposes. In actual practice it is not customary to show on the balance sheet the details of accounts receivable, accounts payable, notes receivable, or notes payable. Only totals for each of these groups are shown.

The eight transactions illustrated in the above discussion are examples

BUILDING		LAND		ACCOUNTS PAYABLE (*In total*)		NOTES PAYABLE		MORTGAGE PAYABLE		ROY F. YOUNG, CAPITAL	
+ *Increase* − *Decrease*	*Balance*	+ *Increase* − *Decrease*	*Balance*	+ *Increase* − *Decrease*	*Balance*	+ *Increase* − *Decrease*	*Balance*	+ *Increase* − *Decrease*	*Balance*	+ *Increase* − *Decrease*	*Balance*
	$25,000.00		$4,000.00		$3,000.00		$5,000.00		$10,000.00		$50,000.00
										+$5,000.00	55,000.00
				+$1,300.00	$4,300.00						
				−1,000.00	3,300.00	+$1,000.00	6,000.00				
		−$600.00	3,400.00							+400.00	55,400.00
								−$10,000.00	0.00		
										−300.00	55,100.00
										−1,000.00	54,100.00
	$25,000.00		$3,400.00		$3,300.00		$6,000.00				$54,100.00

of nearly every type of accounting transaction.[2] Although each transaction changed the balance sheet in some particular way or ways, the equilibrium of the balance sheet was not disturbed because each transaction had two equal sides. In the first transaction there was an increase in assets of $5,000.00 and an increase of similar amount in the total of equities; in the fifth transaction there was a net increase in assets of $400.00 and an increase of similar amount in the total of equities. That each transaction had two sides of equal financial values is not surprising. This naturally follows because asset values must always be balanced by an equal amount of financial claims against them. All accounting transactions are characteristically "self-balancing." In our later exposition of accounting method, this basic characteristic will be referred to frequently.

The Balance Sheet Applies to a Particular Date

Each of the eight transactions described on pages 16–17 caused certain changes in the balance sheet of Roy F. Young. A balance sheet, therefore, must be regarded as a statement which shows the financial condition (or position) of a business at a given instant of time. The next accounting transaction—following the date of a given balance sheet—alters the balance sheet of that business in some particular and brings into being a new balance sheet.

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[2] Not included in these examples are three types of transactions normally associated with the corporate form of business organization and, for that reason, not illustrated above:

1. Liability Increase and Net Worth Decrease. *Example:* A cash dividend declared out of retained income or earned surplus.
2. Liability Decrease and Net Worth Increase. *Example:* Bonds payable are converted into capital stock of the bond-issuing corporation.
3. Net Worth Increase and Net Worth Decrease. *Example:* A dividend is declared and paid in capital stock.

Periodically, it is the responsibility of the management of a business to examine each new balance sheet. In comparison with an actual earlier balance sheet or with a budgeted (i.e., projected or planned) balance sheet, it is management's responsibility to appraise the financial condition of a business and the changes which have occurred in financial condition as being favorable or unfavorable. On the basis of its appraisal, management is then in a position to use this appraisal in making plans relating to the transactions of the accounting period immediately ahead. One of the responsibilities of management, of course, is to manage the assets of a business so as to produce satisfactory balance sheet results.

The new balance sheet on page 17, in comparison with the balance sheet on page 15, shows some changes of interest:

The ratio of cash to current liabilities is 122.6% as compared with 187.5% in the first balance sheet. The cash position of the business, although less favorable, is still very good.

The ratio of current assets to current liabilities is 319.4% as compared with 412.5% in the first balance sheet. The decline in the over-all liquidity of the business is due, of course, to the payment of the mortgage payable.

The ratio of all liabilities to all assets is 14.7% as compared with 26.5% in the earlier balance sheet. The interest of creditors in the business has declined significantly.

In the new balance sheet, also, it may be observed that, for the business of Roy F. Young, the amount of capital invested in merchandise and fixed assets appears reasonable. There is no evidence of an overinvestment of capital in these assets. Merchandise is 38.1% of the current assets and 17.8% of all assets; and fixed assets are 53.2% of all assets. These ratios appear satisfactory. When, for any business, these ratios are not reasonable, both the management and the owners of this business have cause for concern. The reasonableness of amounts and ratios in any given case depends, of course, upon the nature of the business in question and other factors.

The Entity Convention

For accounting purposes each profit-minded business is looked upon as a distinct and independent business entity. Each business is looked upon as being independent and without managerial or proprietary connection with any other business. One man, for example, might own a newspaper business, a radio station, and a sporting goods store. For accounting purposes these three businesses would be looked upon as independent businesses. A separate set of financial statements would be prepared for *each* of these businesses. A balance sheet, for example for *one* of these businesses would repre-

sent only the assets and liabilities of that particular business. This balance sheet would *not* include the assets and liabilities of the other two businesses nor would it include the *personal* assets or liabilities of the owner of these businesses.

Accordingly, it should be clearly understood that the balance sheets of Roy F. Young on pages 15 and 17 represent only the balance sheets of the business of Mr. Young. These two balance sheets do not include the nonbusiness assets and liabilities of Mr. Young as an individual.

Form of the Balance Sheet

The balance sheet may be presented in either of two ways: the *report* form or the *account* form. In the report form the assets appear first; below the assets appear the equities. The first two statements of financial condition in this chapter (see pages 9 and 15) are examples of the report form of balance sheet. A common variation of the report form of balance sheet is the deduction of the liabilities from the assets to leave net worth—in other words, conformity of the balance sheet to the accounting equation of

$$\text{Assets} - \text{Liabilities} = \text{Net Worth}$$

In the account form of balance sheet the assets are placed on the left side and the equities are placed on the right side of the page. The balance sheet of Roy F. Young on page 18 is an example. The account form of balance sheet reflects the accounting equation of

$$\text{Assets} = \text{Liabilities} + \text{Net Worth}$$

In practice the *account* form of balance sheet is commonly used. This is especially true with respect to published balance sheets.

Summary

It is now proper to observe how the assets of a business may be increased or decreased and to note what effect, if any, is exerted upon liabilities and net worth when these increases and decreases occur.

Assets may be increased through	*Thus increasing the equity of*
1. the earning of profits,	the owner.
2. the investment of additional capital by a proprietary interest, and	the owner.
3. the purchase of assets on terms of deferred payment	the creditors.

Assets may be decreased through	*Thus decreasing the equity of*
1. the incurrence of losses,	the owner.
2. the withdrawal of assets by a proprietary interest,	the owner.
3. the disbursement of assets to creditors	the creditors.

Note: It may be observed, parenthetically, that sometimes a transaction—causing no change in total assets—will cause some individual asset to increase and some other assets to decrease by a similar amount. The collection of a note receivable would be an example of this kind of transaction.

A second summary may be prepared to show how the net worth of a business may be increased or decreased. The equity of the owner of a business may be

increased by	*and decreased by*
1. the earning of profits,	1. the incurrence of losses,
2. the investment of additional capital in the business,	2. the owner's withdrawal of assets from the business.

PROBLEMS

Problem 2–1. Clark E. Pace started in business January 1 with an investment of $50,000.00. At the end of the year his balance sheet showed that his interest in the business was $60,000.00. Mr. Pace claimed, therefore, that his net income for the year must have been $10,000.00. Was Mr. Pace correct in his contention? Why?

Problem 2–2. The balance sheet of James A. Cardwell, December 31 19__, was

James A. Cardwell

BALANCE SHEET, DECEMBER 31, 19__

Assets		*Liabilities and Net Worth*	
Current Assets:		Current Liabilities:	
Cash	$ 4,000.00	Accounts Payable	$ 6,000.00
Accounts Receivable	5,000.00	Notes Payable	4,000.00
Merchandise Inventory	20,000.00	Salaries Payable	1,000.00
Marketable Securities	6,000.00		$11,000.00
Supplies	1,000.00		
	$36,000.00	Net Worth:	
Fixed Assets:		James A. Cardwell, Capital	30,000.00
Store Equipment	5,000.00		
	$41,000.00		$41,000.00

Required

1. In what respects does this balance sheet appear strong or weak?
2. Do the merchandise creditors have claims against the specific asset merchandise? Explain.

3. Does the balance sheet reveal how the money borrowed on notes payable was used?

4. Suppose that, shortly after December 31, 19__, the supplies were all used up but that no other changes occurred in the assets of the balance sheet. How would the balance sheet have been changed?

5. How would the balance sheet be affected if the marketable securities were sold for a cash price of $7,000.00?

6. How would the balance sheet be affected if a theft of cash, $300.00, and merchandise costing $200.00, had occurred?

Problem 2–3. Following are the accounts comprising the balance sheet of the business of Jay R. Collins, December 31, 19__:

Cash	$ 43,000.00
Accounts Receivable	30,000.00
Merchandise Inventory	60,000.00
Property and Equipment	90,000.00
Building	120,000.00
Land	7,000.00
Accounts Payable	112,000.00
Interest Payable	3,000.00
Wages Payable	15,000.00
Income Taxes Payable	20,000.00
6% Mortgage on Real Estate, due in 10 years	100,000.00
Jay R. Collins, Capital	100,000.00

Required

1. Balance sheet, December 31, 19__. (Account form.)
2. In what respects does the balance sheet of the business of Jay R. Collins appear strong or weak?

Problem 2–4. The following accounts comprise the assets, liabilities, and capital of the business of Guy L. Clark, December 31, 19__:

Accounts Payable	$ 12,000.00
Accounts Receivable	25,000.00
Building	50,000.00
Cash	17,000.00
Guy L. Clark, Capital	100,000.00
Income Taxes Payable	3,000.00
Land	5,000.00
Merchandise Inventory	30,000.00
Mortgage Payable, due in 7 years	6,000.00
Notes Payable, due in 6 months	10,000.00
Office Equipment	4,000.00

Required

1. Balance sheet, December 31, 19__.
2. In what respects does the balance sheet of the business of Guy L. Clark appear strong or weak?

Problem 2–5.

John A. Willard

BALANCE SHEET, DECEMBER 30, 19__

Assets

Current Assets:		
Cash		$ 7,100.00
Accounts Receivable:		
Emery & Son	$ 200.00	
Kane & Ives	600.00	800.00
Materials and Supplies		1,200.00
Interest Receivable		100.00
		$ 9,200.00
Fixed Assets:		
Equipment	$ 4,000.00	
Store Building	10,000.00	
Land	1,000.00	15,000.00
Other Assets:		
Note Receivable, due in 3 years		2,000.00
		$26,200.00

Liabilities and Net Worth

Current Liabilities:	
Accounts Payable—Young Supply Company	$ 1,000.00
Notes Payable to Bank	2,000.00
Mortgage Interest Payable	100.00
	$ 3,100.00
Long-Term Liabilities:	
Mortgage Payable on Real Estate	4,000.00
	$ 7,100.00
Capital:	
John A. Willard, Capital	19,100.00
	$26,200.00

The following transactions took place December 31:

1. Collected from Emery & Son, $200.00.
2. Paid the note payable, $2,000.00.
3. Sundry supplies, costing $100.00, were discarded as obsolete.
4. Paid the mortgage, $4,000.00 and mortgage interest, $100.00.
5. Sold an accumulation of various kinds of scrap materials for cash, $100.00.

Required

1. Balance sheet, December 31, 19__, giving effect to the five transactions above.

2. In what significant way or ways has the financial position of the business of Mr. Willard been changed?

Problem 2–6. The accounts listed below constitute the balance sheet of the Wilcox Builders Supply Company, a business operated by Robert J. Wilcox:

Cash	$ 3,729.00
Accounts Receivable	25,582.00
Notes Receivable	5,000.00
Due from Officers and Employees	1,415.00
Marketable Securities	13,767.00
Merchandise Inventory	43,331.00
Miscellaneous Equipment	14,038.00
Building	50,000.00
Land	20,000.00
Warehouse in Process of Construction	12,803.00
Patents	5,000.00
Trade-marks	927.00
Accounts Payable	79,489.00
Income Taxes Payable	12,014.00
Wages and Salaries Payable	4,089.00
Robert J. Wilcox, Capital	100,000.00

Required

1. Balance sheet, December 31, 19__. Use the "account form" of statement.

2. In what respects does the balance sheet of the business of Robert J. Wilcox appear strong or weak?

Problem 2–7. The accounts of the balance sheet of the Starrett Seed Company, August 31, 19__, were

Accounts Payable	$22,983.00
Accounts Receivable	16,598.00
Advances to Growers	5,878.00
Automobiles and Trucks	12,211.00
Building	34,027.00
Cash	9,375.00
Land	8,000.00
Merchandise Inventory	32,935.00
Miscellaneous Equipment	15,244.00
Miscellaneous Expenses Payable	1,812.00
Mortgage Payable	10,000.00
Notes Payable (to banks)	25,000.00
Notes Receivable	8,046.00
L. S. Starrett, Capital	82,519.00

Required

Balance sheet, August 31, 19__. Use the "report" form of statement.

Problem 2–8. The assets and liabilities of the Sparkle Soft Drink Company, a business operated by Winthrop L. Crane, on December 31, 19__, were

Cash	$20,459.00
Accounts Receivable	13,312.00
Notes Receivable	5,000.00

Bottled Soft Drinks on Hand	19,411.00
Cases and Bottles	27,052.00
Machinery and Equipment	35,030.00
Trade-marks	1.00
Accounts Payable	8,832.00
Notes Payable	25,000.00
Customers' Refundable Deposits on Cases and Bottles	1,971.00

Required

Balance sheet, December 31, 19__ (account form). You are required to determine the amount of net worth.

Problem 2–9. On December 31, 19__, the balance sheet of the Raymond Drug Company contained the following accounts:

Cash	$ 5,809.73
Accounts Receivable	1,410.80
Inventory of Drugs and Drug Sundries	6,967.35
Inventory of Cigars, Cigarettes, and Tobacco Sundries	365.61
Soda Fountain Supplies	314.29
Fixtures and Equipment	9,130.16
Building	20,687.41
Land	5,000.00
Deposits with Central Gas & Electric Company	75.00
Accounts Payable	3,569.12
Notes Payable	5,000.00
Property Taxes Payable	118.64
Sales Tax Collections Payable to State Treasurer	96.70
Utility Expenses Payable (water, light, and gas)	87.79
Mortgage Payable on Real Estate (due in 10 years)	5,000.00
J. L. Raymond, Capital	35,888.10

Required

Balance sheet, December 31, 19__ (report form).

Problem 2–10. The accounts of the balance sheet of the Edwards Packing Company, December 31, 19__, were

Cash	$ 54,509.00
Accounts Receivable	113,234.00
Marketable Securities (current asset)	20,000.00
Merchandise Inventory	238,446.00
Sundry Supplies (current asset)	1,332.00
Automobiles and Trucks	17,674.00
Office Equipment	17,448.00
Factory Equipment	136,723.00
Building	100,000.00
Land	25,000.00
Patents and Formulas	26,477.00
Accounts Payable	177,011.00
Notes Payable to Banks	100,000.00
Income Taxes Payable	12,046.00
Property Taxes Payable	2,644.00
Wages and Salaries Payable	24,373.00
Mortgage Payable on Real Estate (due in 5 years)	25,000.00
John A. Edwards, Capital	409,769.00

Required

Balance sheet, December 31, 19__ (account form).

Problem 2–11. The following accounts appeared in the balance sheet of the Cubana Sugar Company, July 31, 19__:

Cash	$ 39,182.00
Accounts Receivable	46,208.00
Loans to Farmers (due in 5 months)	167,519.00
Inventory of Sugar	521,046.00
Inventory of Molasses	12,923.00
Materials and Supplies (current asset)	162,050.00
Planted and Growing Sugar Cane	33,715.00
Work Animals, Livestock, and Equipment	103,505.00
Buildings, Machinery, Railroad Rolling Stock, etc.	2,413,512.00
Land	1,684,462.00
Accounts Payable	928,981.00
Notes Payable	26,222.00
First Mortgage Payable (due in 25 years)	461,000.00
F. J. Philippe, Capital	3,767,919.00

Required

Balance sheet, July 31, 19__ (account form).

Chapter 3 DEBIT AND CREDIT / THE JOURNAL AND LEDGER

Introduction

We now understand that each accounting transaction causes some change in the valuations of the balance sheet. It is apparent, however, that revision of the balance sheet by the method used in Chapter 2—accurate though it be for a *few* transactions—is a procedure which is not satisfactory when transactions are numerous. Yet unless a record is made of each and every accounting transaction, how would it be possible for the proprietor of a business to know what his assets are and what assets *should be* on hand at the end of an accounting period? How would it be possible for him to know what his liabilities are unless a proper record has been made of all the elements by which his liabilities are determined? How would it be possible for him to obtain information with respect to the operations of his business unless a written record has been made of the elements by which operations are explained and net income determined?

It follows, therefore, that if, for any given business, balance sheets and statements of income are to be fairly stated for the dates and periods to which they apply, all elements entering into the construction of these statements must have been recorded properly. In this way management can be informed not only as to the character and amount of the liabilities of the business but also as to what the assets are and should be. Proper record should be made of assets received and of values expended or consumed; and of liabilities incurred and liabilities paid. For instance, in Chapter 2, after the balance sheet had been adjusted to give effect to the several transactions of that chapter, it was found that the asset cash had a bookkeeping value of $11,400.00. This value represented the amount of cash that should be on hand. If less cash were actually on hand, the proprietor, Roy F. Young, would realize that some cash had been misappropriated or had been improperly disbursed or accounted for.

It is therefore necessary to find a procedure by which it would be possible not only to quickly record changes in the assets, liabilities and net

worth of a business but to record these changes in such a way as to avoid the necessity of any immediate *actual* revision of the values of the balance sheet. A system of this kind should permit each transaction to be individually recorded and it should permit, also, a check of the figures if subsequently the new balance sheet—by virtue of its failure to balance—discloses the fact that an error has been made. A system of this kind, using the balance sheet and transactions of the business of Floyd L. Smith, is illustrated below.

Floyd L. Smith

BALANCE SHEET, NOVEMBER 30, 19__

Assets		*Liabilities and Net Worth*	
Current Assets:		Current Liabilities:	
Cash	$3,900.00	Accounts Payable:	
Accounts Receivable:		Harley Sales Co.	$ 200.00
James E. Nelson	300.00		
Marketable Securities	1,000.00	Net Worth:	
	$5,200.00	Floyd L. Smith, Capital	6,000.00
Fixed Assets:			
Office Equipment	1,000.00		
	$6,200.00		$6,200.00

Mr. Smith represents clients in the purchase, sale, rental, management, and servicing of real estate. Assume the following transactions to occur during the first 15 days of December, 19__:

December

1 Bought an adding machine for cash from the Riley Business Equipment Company, $100.00.

4 Cash was withdrawn from the business for the private use of Mr. Smith, $1,000.00.

9 The November account of the Harley Sales Company was paid $200.00.

10 Bought an office safe on 30 days' credit from the Harley Sales Company, $500.00.

11 The marketable securities were sold for cash, $1,000.00. The original cost of these securities was also $1,000.00.

15 A used car was purchased from the Bolen Motor Company, $1,000.00. A cash payment of $400.00 is made with the balance of $600.00 being covered by a note payable due in monthly installments of $100.00.

To introduce the recording process for the values of the balance sheet, November 30, 19__, and the six transactions of December 1–15, we will begin with the following form, which is called a "T" account:

Actually, T accounts are convenient representations of the formal accounts of a business. A formal account is illustrated on page 34.

For the time being, T accounts will be used to represent the assets and the equities of a business. This will be done by using individual T accounts for each kind of asset and equity. One T account will be used for Cash, one for Marketable Securities, one for Office Equipment, and so on. The assets and equities of the balance sheet of Floyd L. Smith, November 30, 19__, would be recorded in T accounts by placing the dollar value of each asset on the left side of the T account representing that asset, and by placing the dollar value of each equity on the right side of the T account representing that equity. The placement of values for assets on the left side of T accounts, and values for equities on the right side, parallels the position of assets and equities in the *account form* of balance sheet—assets being listed on the left side and equities on the right side. The full T-account record of the balance sheet of Floyd L. Smith, November 30, 19__, would be

CASH				JAMES E. NELSON			
Nov. 30	Bal.	3,900.00		No.. 30	Bal.	300.00	

MARKETABLE SECURITIES				OFFICE EQUIPMENT			
Nov. 30	Bal.	1,000.00		Nov. 30	Bal.	1,000.00	

HARLEY SALES CO.				FLOYD L. SMITH, CAPITAL			
			Nov. 30 Bal. 200.00				Nov. 30 Bal. 6,000.00

In similar fashion, the dollar value of all new assets subsequently acquired would be added to the left side of the particular T accounts representing such assets, and the dollar value of all new equities incurred would be added to the right side of the particular T accounts representing these equities. Conversely, the decrease of an asset would be recorded on the right side of the T account representing that asset and the decrease of an equity would be recorded on the left side of the T account representing that equity.

Values for equity accounts appear on the right side of the T accounts representing these equities in conformity with their position on the right side of the account form of balance sheet. Increases in equities would be added to the right side of the T accounts representing these equities; decreases would be recorded on the left side.

This discussion may be summarized in the following manner:

1. On the left side of an account are recorded
   a) assets and increases in assets, and
   b) decreases in equities.

2. On the right side of an account are recorded
   a) equities and increases in equities, and
   b) decreases in assets.

Debit and Credit

"Debit" and "credit" are two terms commonly used to indicate the manner in which a transaction is to be recorded in the accounts of a business—whether there has been an increase in an asset, an increase in an equity, a decrease in an asset, or a decrease in an equity.

Every entry on the left side of an account is called a *debit.*

Every entry on the right side of an account is called a *credit.*

Another way of explaining the terms "debit" and "credit" is to state that we

DEBIT in order to record
1. an asset;
2. an increase in an asset;
3. a decrease in a liability or ownership-equity account; and

CREDIT in order to record
1. A liability or ownership-equity account;
2. An increase in a liability or ownership-equity account;
3. A decrease in an asset.

The terms "debit" and "credit" should be firmly fixed in mind. Once their meanings are thoroughly understood, the terms can be used rather easily to describe the accounting record of individual transactions. The correct use of these terms is illustrated in the following description of the six transactions of Floyd L. Smith:

Dec. 1	DEBIT:	Office Equipment	100.00	
	CREDIT:	Cash		100.00
		To record purchase of adding machine.		

In this transaction we debit in order to record an increase in the asset office equipment; and we credit in order to record a decrease in the asset cash.

Dec. 4	DEBIT:	Floyd L. Smith, Capital	1,000.00	
	CREDIT:	Cash		1,000.00
		To record withdrawal of capital.		

In this transaction we debit in order to record a decrease in the net worth of Floyd L. Smith; and we credit in order to record a decrease in the asset cash.

Dec. 9	DEBIT:	Harley Sales Co.	200.00	
	CREDIT:	Cash		200.00
		To record payment of November account.		

In this transaction we debit in order to record a decrease in the liability accounts payable (Harley Sales Co.); and we credit in order to record a decrease in the asset cash.

Dec. 10	DEBIT:	Office Equipment	500.00	
	CREDIT:	Harley Sales Co.		500.00
		To record purchase of office safe.		

In this transaction we debit in order to record an increase in the asset office equipment; and we credit in order to record an increase in the liability accounts payable (Harley Sales Co.).

Dec. 11	DEBIT:	Cash	1,000.00	
	CREDIT:	Marketable Securities		1,000.00
		To record sale of securities at a price equal to their cost.		

In this transaction we debit in order to record an increase in the asset cash; and we credit in order to record a decrease in the asset marketable securities.

Dec. 15	DEBIT:	Automobile	1,000.00	
	CREDIT:	Cash		400.00
	CREDIT:	Notes Payable		600.00
		To record purchase of used car.		

In this transaction we debit in order to record an increase in the asset automobile; we credit in order to record a decrease in the asset cash, $400.00; and we credit in order to record an increase in the liability notes payable, $600.00.

After the debit and credit values of these six transactions have been placed in the accounts to which they relate, the T-account record of the business of Floyd L. Smith, December 15, 19__, would be

CASH

Nov. 30	Bal.	3,900.00	Dec. 1		100.00
Dec. 11		1,000.00	4		1,000.00
			9		200.00
			15		400.00

JAMES E. NELSON

Nov. 30	Bal.	300.00			

MARKETABLE SECURITIES

Nov. 30	Bal.	1,000.00	Dec. 11		1,000.00

OFFICE EQUIPMENT

Nov. 30	Bal.	1,000.00			
Dec. 1		100.00			
10		500.00			

AUTOMOBILE

Dec. 15		1,000.00			

HARLEY SALES CO.

Dec. 9		200.00	Nov. 30	Bal.	200.00
			Dec. 10		500.00

NOTES PAYABLE

			Dec. 15		600.00

FLOYD L. SMITH, CAPITAL

Dec. 4		1,000.00	Nov. 30	Bal.	6,000.00

To ascertain the amount of cash on hand, the left side of the Cash account is added and the total of the right side deducted; the remainder of $3,200.00 is the balance of the Cash account and the amount of cash on hand. The balances for other accounts are determined in a similar manner except that, for equity accounts, the computation is reversed, the total of

the left side being deducted from that of the right side. The balance of an account is simply the excess of the total of one side over that of the other. If the left side of an account is the larger, the account has a debit balance; if the right side is the larger, the account has a credit balance.

On the basis of the balances in these accounts, the new balance sheet of Floyd L. Smith would be

Floyd L. Smith

BALANCE SHEET, DECEMBER 15, 19__

Assets			*Liabilities and Net Worth*		
Current Assets:			Current Liabilities:		
Cash		$3,200.00	Accounts Payable:		
Accounts Receivable:			Harley Sales Co.		$ 500.00
James E. Nelson		300.00	Notes Payable		600.00
		$3,500.00			$1,100.00
Fixed Assets:			Net Worth:		
Office Equipment	$1,600.00		Floyd L. Smith,		
Automobile	1,000.00	2,600.00	Capital		5,000.00
		$6,100.00			$6,100.00

Rule of Double Entry

In each of the foregoing six transactions the debit value of each transaction was equal to the credit value. This equality, of course, was to be expected. Since the total of the debit side of a balance sheet is always equal to the total of the credit side and, since this equality is continuous, it follows that the value of the debit side of each transaction must always equal the value of the credit side. No entry for the recording of an accounting transaction is complete, therefore, unless the debit entry is equal in value to the credit entry. This is the rule of double entry: *For every debit there must be a credit of equal value.*

When the accounts of a business are maintained in accordance with the rule of double entry, the bookkeeping involved is known as "double-entry bookkeeping."

Definitions

The following definitions may now be formally considered:

Transaction. An accounting transaction is any business occurrence which causes a change in any of the valuations of the balance sheet.

Not all business transactions are accounting transactions. For example, on October 1, 19__, a contract is signed by the General Sales Corporation by which this company agrees to lease certain real estate for a period of five years beginning the following January 1, 19__. The annual rental is $6,000.00, payable $500.00 monthly on the first day of each month commencing with January 1, 19__. This contract, although a business trans-

action, is not an accounting transaction because the contract does not change any of the values of the balance sheet of October 1, 19__.

Account. An account is an appropriately titled written record representing some specific asset or equity (or subdivision thereof) of the balance sheet. In this written record the accounting value of each asset and equity is reflected; and increases or decreases in value are systematically recorded during an accounting period.

A common form of account follows.

TITLE OF ACCOUNT

Date	*Explanation*	*F*	*Debit Amount*	*Date*	*Explanation*	*F*	*Credit Amount*

The words shown in this form do not appear in the actual account forms of a business. They are shown here in order to indicate the purpose of each line or column. The *Date* column is used to record the date of a transaction. The *Explanation* is used only to record some special comment or information relating to an entry. The letter *F* is an abbreviation for *Folio;* an alternative name for the folio column is reference column. The use of this column is explained on page 36. The *Amount* columns are used to record the dollar values of entries.

(Often, for purposes of discussion and analysis, it is convenient to use T accounts to represent the formal accounts of a business. For these purposes T accounts will be used liberally in this book.)

The title of an account should precisely describe the kind of asset or equity which it represents.

Balance of an Account. The balance of an account is the excess of debits over credits, or vice versa. If the debit values exceed the credit values, the account has a debit balance; if the credits exceed the debits, the account has a credit balance. Asset accounts have debit balances; liability and net worth accounts have credit balances. The debit balance of an asset account represents the accounting value of the asset on hand. If the Cash account, for example, has a debit balance of $10,301.19, it is understood that, as of the date of the balance in the account, there is actually cash on hand in the amount of $10,301.19. Each credit balance in an equity account represents the interest of a creditor or owner in the assets of a business as of the date that the balance of the account is computed.

Ledger. A collection of accounts representing all the assets and equities of a business is called the ledger of that business. In the actual practice of bookkeeping it is usual to place only one account on a ledger page. Ledgers are generally not bound but are made up of loose-leaf pages.

The Journal

Under double-entry bookkeeping the written record which is made of the debit *and* credit elements of a transaction is called the "entry" for the transaction. The sum of the debit values of each entry is, of course, equal to the sum of the credit values.

Although these debit and credit values could be placed directly in the accounts of a ledger, it is customary practice

1. to record all transactions, *first*, in a preliminary record called the *journal;*
2. to transfer each of the debit and credit values in the journal to the accounts of the general ledger.

A journal is also called a book of original entry. The process of recording entries in the journal is called *journalizing.* The record of each transaction in the journal is called the *journal entry.*

Each journal entry should contain the following information:

1. The date of the transaction
2. The account to be debited and the amount
3. The account to be credited and the amount
4. An adequate explanation of the entry if the meaning of the journal entry is not clear from the formal debits and credits themselves

A journal entry which embraces more than two accounts is called a *compound journal entry.*

An entry in the journal of a business may be looked upon as the official record of, as well as an authorization for, a change in the balances of designated ledger accounts. No debit or credit value, therefore, should ever be placed in a ledger account unless a complete entry for the transaction in question has *first* been recorded in the journal.

A common form of journal, with three transactions entered, is illustrated below.

JOURNAL Page 1

1957					
July	30	Cash	1	10,000.00	
		H. E. Davenport, Capital	40		10,000.00
		Began business today with a cash investment of $10,000.00.			
		Office Furniture	21	500.00	
		Cash	1		500.00
		Bought 3 desks, 3 typewriters.			
	31	Office Machines and Equipment	22	1,404.00	
		Carey & Hayes, Inc.	39		1,404.00
		Purchased adding machine, mimeograph machine, and 4 typewriters—terms 90 days net.			

The following points should be noted in the construction of this journal:

1. The year is written in small figures just above the recording of the first month-date. The year-date is written just once to a page if all entries on the page come within the year-date recorded at the head of the page.
2. The name of the account to be debited is written close to the date column. The amount is placed in the first, or debit, column.
3. The name of the account to be credited is written directly below the debit account but indented one-half inch or more to the right. This is done in order to distinguish the credit account from the debit account. The amount is placed in the second, or credit, money column.
4. The explanation for an entry is written directly below the last credit account.
5. One line should be left blank between journal entries in order to clearly separate transactions from each other.
6. The small column immediately to the left of the two money columns is a "ledger folio" column. The use of this column is explained below.

Posting

The debit and credit values of all transactions recorded in the journal must sooner or later be transferred to the proper accounts in the general ledger. This "transferring" process is called "posting." The detailed procedure of posting is as follows:

1. The debit member of a journal entry is posted first.
2. Turn to the ledger account to be debited. On the debit side of this account enter the following:
   a) The date—year, month, day. For succeeding entries in an account, the year and month should be recorded only if a change has occurred in the year-date or the month-date.
   b) The journal page from which the debit was taken, J1, J2, J3, etc. The recording of the journal page should be made in the "reference" or "folio" column.
   c) The amount.
3. Turn to the journal. In the ledger folio column, enter the ledger page to which the debit amount was posted. The ledger and journal are now cross-indexed to each other.
4. The credit member of a journal entry is transferred to the general ledger in a similar manner. When this has been done, the journal entry has been posted completely.

Illustration

When the journal entries on page 35 have been posted, the affected ledger accounts of the ledger will appear as follows:

CASH — Page 1

1957 July	30			J1	10,000.00	1957 July	30			J1	500.00

OFFICE FURNITURE — Page 21

1957 July	30			J1	500.00						

OFFICE MACHINES AND EQUIPMENT — Page 22

1957 July	31			J1	1,404.00						

CAREY & HAYES, INC. — Page 39

						1957 July	31			J1	1,404.00

H. E. DAVENPORT, CAPITAL — Page 40

						1957 July	30			J1	10,000.00

The "explanation" column of a ledger account may be used to record

1. the terms of a sale or the invoice number relating to a debit posting in a customer's account;
2. information of any nature if the information is expected to be of definite value to users of the account.

WHEN SHOULD POSTINGS BE MADE TO THE GENERAL LEDGER? Although there is usually no specific date when postings must be made to ledger accounts, as a general bookkeeping rule of proved value the work of posting the entries representing a month's business should be done at least monthly. More frequent postings may be necessary in order to avoid the accumulation of too great an amount of posting work at the end of a month and in order to meet the need for up-to-the-minute information. Transactions involving debtor and creditor relationships, especially the former, should be posted daily so that these accounts will be up to date and correct at all times. These accounts must be maintained on a current basis if the credit and collection policies of a business are to be successfully administered.

Advantages of the Journal

The following favorable considerations apply to the journal:

1. A chronological and complete record of transactions is provided in *one* place. And folio references (to the journal) in the accounts of a ledger make the re-establishment of any given transaction relatively easy.
2. Because there is an adequate explanation of each entry in the journal, it is unnecessary to have repetitive explanations accompany each

debit and credit value in the ledger. Not only is labor saved but the ledger itself is simplified by being relieved of a great mass of written detail.

3. The use of a journal is added assurance that the rule of double entry will be observed in the recording of transactions and that the general ledger will be kept in balance. This is so because each journal entry is a complete reflection of the rule of double entry, and because the journal and ledger are cross-indexed to each other in the procedures of posting.

4. The journal eliminates the necessity of making immediate entries in the ledger of transactions as they take place. When a journal is used, postings to the ledger may be made at any convenient time. For a large business, especially, this is a consideration of great importance.

5. The journal facilitates the discovery of errors.
   a) The failure of the trial balance to balance may be due to an error in posting.
   b) If a sale of $100.00 to E. L. Schott is improperly debited to the account of E. J. Shore, the error may not be discovered until E. J. Shore refuses to pay the $100.00 debited to his account. The journal must be referred to in order to ascertain the proper account to be debited. The individual customer's account, it will be noted, does not yield this information.

6. Courts recognize the journal as evidence in proving or disproving claims because the journal is the book wherein proved transactions are originally recorded. The journal is a record of *original* entry, whereas the ledger is only a summary or transcript of the original record. Courts do not accept unsupported ledger entries.[1]

7. Since most businesses find it advisable to use several journals, division and economy of office labor are made possible. These journals are discussed and illustrated in Chapter 7.

PROBLEMS

Problem 3–1. Following are the accounts comprising the balance sheet of the business of David B. Jackson, December 31, 1958:

Cash	$ 43,000.00
Accounts Receivable	30,000.00
Merchandise Inventory	60,000.00
Machines, Fixtures, and Equipment	90,000.00
Building	120,000.00
Land	7,000.00
Accounts Payable	112,000.00
Mortgage Interest Payable	3,000.00
Wages Payable	15,000.00
Income Taxes Payable	20,000.00
6% Mortgage Payable, due January 1, 1966	100,000.00
David B. Jackson, Capital	100,000.00

[1] Regarding "accounting and the law of evidence" see E. M. Morgan and J. M. Maguire, *Cases and Materials on Evidence* (Brooklyn: Foundation Press, 1951), pp. 629–634. Also J. L. Dohr, G. C. Thomson, and W. C. Warren, *Accounting and the Law* (St. Paul: West Publishing Company, 1952), pp. 923–935.

Required

1. Balance sheet, December 31, 1958. (Report form.)
2. In what respects does the balance sheet of the business of Mr. Jackson appear strong or weak?

Problem 3–2. Following are the transactions of W. E. Clark for December 19–31, 19__:

1. He began business on December 19, 19__, with cash, $25,000.00.
2. He buys merchandise from Lewis & Son for cash, $1,000.00.
3. Store fixtures and equipment are purchased on credit from Rhodes & Stratton, Inc., for $3,300.00.
4. A cash loan is made to F. M. Ryan, $1,000.00. Mr. Ryan's 60-day note is received in exchange.
5. He buys merchandise from Lewis & Son on account, $4,000.00.
6. He buys a rug for his private office, $1,000.00. This rug is purchased from the Scott Furniture Co., on terms of 30 days' credit.
7. He makes a part payment of $1,000.00 on the bill of the third transaction.
8. He buys a U. S. Treasury bond for cash, $1,000.00.
9. He pays $500.00 cash to the Scott Furniture Co., as part payment of the bill of transaction 6.
10. By agreement a set of fixtures, purchased in transaction 3, is returned to Rhodes & Stratton, Inc., $300.00. There is no cash involved in this transaction.
11. He withdraws cash for private use, $5,000.00.
12. A contract is signed for the purchase of land, $1,000.00, and building, $10,000.00, title and consideration to pass on the tenth day of January.

Required

1. What accounts should be debited and credited in the above transactions?
2. Enter the debit and credit values in appropriate T accounts.
3. Balance sheet, December 31, 19__.

Problem 3–3. John A. Ludman opens a business for the servicing of automobiles. His cash investment on June 28, 19__, is $20,000.00. His transactions for the next two days are as follows:

1. He arranges for the use of a building for his business. The rent is to be $200.00 a month commencing July 1. Mr. Ludman is allowed to occupy the building on June 28–29–30 without charge.
2. He opens an account at the First National Bank, depositing $20,000.00.
3. He buys small tools from the Hanes Equipment Company for cash, $110.00.

4. A customer, H. J. Leonard, brings in a car to have the speedometer repaired. The job is estimated to cost $20.00. Mr. Ludman sends the speedometer to the local agency of the Stewart-Warner Corporation for repair.
5. In order to divide the office into two rooms, a movable sectional wall of fluted glass is installed at a cash cost of $400.00.
6. He buys shop equipment from the Wells & Jack Corporation, $3,900.00. He pays cash, $900.00, and signs a mortgage note for the balance, which is payable $100.00 monthly, the first installment payment to be August 1, 19__.
7. He buys 100 gallons of oil from the Sun Oil Company on account, $100.00.
8. He purchases miscellaneous office equipment from the Central Supply Company on account, $300.00.
9. He arranges for gas, electricity, and water services; and in completing these arrangements he makes a deposit of $25.00 to guarantee payment of bills. This money is refundable when service is discontinued. (*Note.* This deposit is a noncurrent asset to be placed between the current assets and the fixed assets of the balance sheet.)
10. An electric advertising sign is completed and attached to the building. This sign was purchased from, and installed by, the City Sign Company at a price of $350.00 for which a note payable was given. The sum of $100.00 is to be paid on or before July 10, 19__, and payments of $50.00 monthly thereafter, the first $50.00 payment being due August 10, 19__.

Required

1. What are the proper debits and credits to record the above transactions? Record these debit and credit values in appropriate T accounts.
2. Balance sheet, June 30, 19__.

Problem 3–4. J. C. Martin, preparatory to active business operations, engages in the following transactions in October 19__:

1. He invests cash, $10,000.00.
2. He buys land for cash from Paul E. Coleman, $2,000.00.
3. He buys land, $1,000.00, and a building, $10,000.00, from A. B. Lanner, paying $2,000.00 cash immediately and giving a 10-year mortgage for the balance of $9,000.00.
4. He buys office equipment for cash from Dameron & Curry, $1,600.00.
5. He pays cash to Ward & Company for an installation of linoleum on his floors, $600.00.
6. A used typewriter is purchased for cash from the Modern Typewriter Exchange, $70.00.
7. A neon advertising sign is installed on the building by the Dean Sign Company; a check is issued in payment, $400.00.

8. The typewriter, purchased in transaction 6, is returned because not satisfactory. In its place a new typewriter is purchased for $180.00, the difference of $110.00 being paid in cash.
9. A contract is signed with the Hoover Protective Agency, Inc., whereby Mr. Martin's property will have special night protection by Hoover private police. This service, to commence on the first day of next month, will cost $25.00 monthly, payable on the tenth of each month.
10. A cash register, $100.00, and a bookkeeping machine, $750.00, are purchased from the National Cash Register Company, on terms of a down payment of $150.00 and monthly payments thereafter of $70.00.

Required

1. What are the proper debits and credits to record the above transactions? Record these debits and credits in "journal entry form" as illustrated on page 35.
2. Post the journal entries to the ledger.
3. What is the new balance sheet? The balance sheet may be dated October 10, 19__.

Chapter 4 INCOME AND EXPENSE

Introduction

Let us reproduce the balance sheet of Floyd L. Smith as we left it on page 33:

Floyd L. Smith

BALANCE SHEET, DECEMBER 15, 19__

Assets			*Liabilities and Net Worth*	
Current Assets:			Current Liabilities:	
Cash		$3,200.00	Accounts Payable:	
Accounts Receivable:			Harley Sales Co.	$ 500.00
James E. Nelson		300.00	Notes Payable	600.00
		$3,500.00		$1,100.00
Fixed Assets:			Net Worth:	
Office Equipment	$1,600.00		Floyd L. Smith,	
Automobile	1,000.00	2,600.00	Capital	5,000.00
		$6,100.00		$6,100.00

Assume that Mr. Smith now collects a 5% cash commission of $1,000.00 on the sale of certain real estate for one of his clients. What is the effect of this transaction upon the balance sheet? It is clear that cash has been increased by $1,000.00. It is also clear that, since total assets have been increased by $1,000.00, total equities must also have been increased by $1,000.00. The increase in assets, in this case, is the evidence of the income earned by Mr. Smith. The equity or interest of Mr. Smith in the business has been increased by $1,000.00 because the income earned and the increase in assets belong to him alone. With this increase in assets, Mr. Smith's proprietary interest in the total assets of his business has been increased correspondingly. In the language of accounting, this income transaction has resulted in an increase in the net worth of Floyd L. Smith. All transactions involving the earning of income have this effect. Fundamentally they are credits to net worth because they increase the claim of a proprietary interest.

Definition of Income

In the free exchange of goods and services for other goods and services, the increase in net worth resulting from the excess of the fair cash values of the considerations received over the accounting cost of the considerations surrendered is earned income.

In the interest of making statements of income more informative, accountants generally use the terms *gross income* (or *revenue*) and *net income* to explain earned income. For the purpose of the moment these two incomes may be broadly defined as follows:

Gross Income. In free and independent transactions, the fair cash values of the considerations received for the sale or use of assets and services constitute gross income. From an accounting point of view, the considerations received must be measurable in terms of money.

Gross income is earned at the time when an enforceable property right is created against a legal person because of his receipt of a contractual consideration. The evidence of this income may be the receipt of cash. The earning of a gross income, however, does not necessarily mean that cash has been collected. The evidence of this income may be a noncash asset. Actually the earning of a gross income signifies only that, because of a consideration delivered, another consideration has been received or that the right to receive a consideration has been created.

The sale of merchandise on cash or credit terms, the rental earned on properties leased to tenants, fees for personal services, and so on, are examples of various kinds of gross income.

Net Income. Costs are commonly incurred in the operation of a business. These costs are those incurred in the earning of income. For any given period of time, the excess of all revenues over all costs is called net income.

Expense

Assume that Mr. Smith spends $100.00 of his cash for advertising purposes. What is the effect of this transaction upon the balance sheet? It is clear that cash has been reduced by $100.00. It is also clear that, since total assets have been decreased by $100.00, total equities must also have been decreased by $100.00. The expenditure[1] is a cost to Mr. Smith. *His* proprietary interest in the assets of the business has been reduced. In the language of accounting, this expense transaction has resulted in a decrease of the net worth of Floyd L. Smith. All expense transactions have this effect; fundamentally they are debits to net worth because they decrease the claim of a proprietary interest.

There are many expenditures similar to the expenditure for advertising.

[1] An expenditure may be defined as the disbursement of cash or other asset, or the incurring of an obligation.

Payments must be made for rent, for the handling of materials, for labor, for taxes, for legal costs, for insurance premiums, for repairs, and so on. These expenditures, individually and collectively, operate more or less directly to reduce the net worth of a business. In a more practical sense, these costs reduce the profits of a business and, in this way, result in a reduction of net worth. These are the costs *incurred in the production of gross income.* In the accounting sense these expenditures are known as expenses.

Definition of Expense

Assets and services are consumed in producing the gross income of a business. When consumed, these values become expense. To illustrate, an expense may occur under any of the following circumstances:

1. It may occur through the physical consumption of an asset.
   Example: A tank car of gasoline is purchased. The gasoline is an asset when received but it is converted into an expense as it is consumed.
2. It may occur through the expiration, or lapsing, of a right or privilege.
   Example: On January 1, 1958, X paid the sum of $2,000.00 for certain patent rights (expiring December 31, 1958). With the expiration of the period for which the patent was valid and valuable, the value of $2,000.00 expires also. By December 31, 1958, then, the patent rights will have been converted from an asset into an expense.
3. It may be an expenditure for personal services. (As a general rule an expenditure for personal services is an expenditure for expense. To this general rule, however, there are some important exceptions.)
   Example: Wages of shipping department employees are paid, $3,000.00.

In all cases, however, *an expense represents the decrease in net worth resulting from the necessary consumption of value for the purpose of producing periodic income.*[2] As a general rule expenses are incurred voluntarily.

This is a broad definition of the term "expense." In the general practice of accounting, however, the term is not interpreted to include the cost of merchandise which has been sold. The reason is that merchandise is made the subject of separate analysis and control.

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[2] A loss, on the other hand, is realized when value is consumed or surrendered but not with the intent that income shall be produced. A loss is involuntary and normally of irregular occurrence. An uninsured building destroyed by fire, for instance, is a loss and *not* an expense.

Practically, an expenditure may be considered as an expense rather than as a loss if it is not abnormal.

Income and Expense Accounts Are Subdivisions of the Capital Account

In the preceding pages it was pointed out that incomes increase the net worth of a business; and expenses decrease the net worth. The difference between the totals of the incomes and expenses for an accounting period is the net income or net loss of a business for that period. The proprietor, however, wishes to know not only what amount of net income has been earned but also how this income was earned. He wishes to know what his sources of income have been and the amount of income contributed by each. He wishes to know what expenses have been incurred and the amount which has been expended for each kind of expense. This information, however, is not available to him in a practical form if incomes and expenses are recorded directly in the Capital account as increases and decreases.

To overcome this difficulty, temporary subdivisions of the Capital account are opened for the separate record of individual items of income and expense. These subdivisions are individual accounts. A separate account is opened for each type of income and expense in which the management of a business is interested. For instance, one account will be opened for Advertising Expense, one for Traveling Expenses, one for Wages Expense, one for Rent Expense, and one for each type of expense about which information is desired.

Suppose that a check of $500.00 is issued in payment of newspaper advertising. Since this expenditure reduces the net worth of the business making the expenditure, it will be recorded by making a debit to that particular subdivision of the Capital account whose function is that of showing the reductions of net worth caused by expenditures for advertising expense. The disbursement of $500.00 is therefore debited to the Advertising Expense account and credited to the Cash account. A reduction in net worth has been recorded by making a debit to the Advertising Expense account.

It follows, then, that each expense—as it is incurred—is classified as to type of expense and is debited to that expense account (i.e., subdivision of the debit side of the Capital account) which has the function of representing the particular type of expense in question. When these expense accounts are debited, each debit means, fundamentally, that a decrease in net worth has been recorded by means of a debit to an expense account.

In like manner each type of income will be credited to that income account (i.e., subdivision of the credit side of the Capital account) which has the function of representing the particular type of income in question. One account, for example, will be opened for Interest Income, one for Dividend Income, one for Commission Income, and one for each type of income about which information is desired. When these accounts are credited, each credit means, fundamentally, that an increase in net worth has been recorded by means of a credit to an income account.

SUMMARY. Expenses, therefore, will be recorded as debits to individual expense accounts; and incomes will be recorded as credits to individual income accounts.

Examples of Income

It will be assumed that the transactions described below are those of Floyd L. Smith on the dates shown.

Dec. 16 A calculating machine is rented to the firm of John Conroy & Son, which was taking inventory. Cash of $10.00 is collected as rental. The journal entry to record the collection is

Dec. 16	Cash	10.00	
	Miscellaneous Income		10.00
	To record rental of calculating machine.		

In this example we debit in order to record an increase in the asset cash; and we credit Miscellaneous Income in order to record an increase in the proprietary interest of Floyd L. Smith.

Dec. 17 Real estate is sold for the account of a client. A cash commission of 5% is collected on the sale of $20,000.00. The journal entry to record the collection is

Dec. 17	Cash	1,000.00	
	Commission Income		1,000.00
	To record 5% commission on sale of $20,000.00.		

In this example we debit in order to record an increase in the asset cash; and we credit Commission Income in order to record an increase in the proprietary interest of Floyd L. Smith.

Dec. 18 One hundred shares of the capital stock of the Brookfield Baking Company are purchased for cash at a cost of $2,000.00. Shortly thereafter, December 30, 19__, a dividend check of $20.00 is received. The journal entries are

Dec. 18	Marketable Securities	2,000.00	
	Cash		2,000.00
	To record purchase of 100 shares of Brookfield Baking Company stock.		
Dec. 30	Cash	20.00	
	Dividend Income		20.00
	To record dividend check.		

In the entry of December 30, 19—, we debit in order to record an increase in the asset cash; and we credit Dividend Income in order to record an increase in the proprietary interest of Floyd L. Smith.

Dec. 20 A fire insurance policy is sold for the account of the General Fire Insurance Company. Floyd L. Smith, as agent for the insurance company, collects a cash commission of $70.00 for his services in making the sale. The journal entry is

Dec. 20	Cash	70.00	
	Commission Income		70.00
	To record commission earned on sale of fire insurance policy.		

In this transaction we debit in order to record an increase in the asset cash; and we credit Commission Income in order to record an increase in the proprietary interest of Floyd L. Smith.

In each of these four income transactions, cash was received. An income transaction, however, does not always mean that cash has been received. For example, a plot of land may have been purchased some years ago at a cost of $20,000.00; today the property is sold for $30,000.00, with payment being received in marketable securities. The gain here is $10,000.00 even though no cash has been involved. Similarly, merchandise may be sold for a price in excess of its original purchase cost; and the sale of this merchandise may be made on credit terms of 60 days for payment. Even though no cash is currently received, the gross profit on the sale is considered as being earned in the month in which the sale was made.[3] Interest on notes receivable and on bonds owned is actually earned day by day and month by month—that is, it is earned as time goes by. This is true even though there is no collection of interest. Interest on a bond, for example, is earned currently even though the interest coupon may not be collected until a later date.

Noncash incomes are further considered in Chapters 12 and 13.

Examples of Expense

In this section, also, it will be assumed that the transactions described below are those of Floyd L. Smith on the dates shown.

[3] Entries for transactions involving sales of merchandise have not been discussed in this chapter because of certain complexities: the credit part of a transaction for the sale of merchandise involves not only income but a decrease in the asset merchandise as well. There are, additionally, certain practical difficulties in ascertaining the values to be assigned to each of the two credit values. Accordingly, accounting for merchandise transactions will be deferred; this will be discussed in Chapter 6.

Dec. 1 Rent for the month of December is paid, $100.00. That this payment constitutes a cost-of-income is clear by observing that when a business pays rent for the space which it occupies, the disbursement is a prerequisite to the creation of income, i.e., if sales are to be made, a place in which to make them is a prerequisite. The journal entry is

Dec. 1	Rent Expense	100.00	
	Cash		100.00
	To record payment of rent for December.		

In this transaction we debit Rent Expense in order to record a decrease in the proprietary interest of Floyd L. Smith; and we credit in order to record a decrease in the asset cash.

Dec. 5 Mr. Smith joins the City Realtors' Association and pays an entrance fee of $20.00. As one of the costs of securing prospects for new business, this disbursement is one of the expenses incurred by the business of Mr. Smith in the earning of its income. The journal entry is

Dec. 5	General Expense	20.00	
	Cash		20.00
	To record fee, City Realtors' Association.		

In this transaction we debit General Expense in order to record a decrease in the proprietary interest of Floyd L. Smith; and we credit in order to record a decrease in the asset cash.

Dec. 21 Cash is paid for newspaper advertising, $70.00. The disbursement is made for the purpose of creating income. The journal entry is

Dec. 21	Advertising Expense	70.00	
	Cash		70.00
	To record payment of advertising bill.		

In this transaction we debit Advertising Expense in order to record a decrease in the proprietary interest of Floyd L. Smith; and we credit in order to record a decrease in the asset cash.

Dec. 24 Cash is disbursed in payment of salesmen's commissions, $110.00. Very clearly this is a necessary cost incurred in earning income. The journal entry is

Dec. 24	Commission Expense	110.00	
	Cash		110.00
	To record salesmen's commissions.		

In this transaction we debit Commission Expense in order to record a decrease in the proprietary interest of Floyd L. Smith; and we credit in order to record a decrease in the asset cash.

In each of these four expense transactions, cash was disbursed. An expense transaction, however, does not always mean that cash has been disbursed. Supplies withdrawn from the stockroom of a garage for repairs on company-owned automobiles would be an expense, but the transaction in itself would not involve any current disbursement of cash. This particular transaction would be recorded as follows:

Automobile Repairs Expense	xxx xx	
Automobile Supplies		xxx xx
To record supplies used in repairs.		

In this transaction the Automobile Repairs Expense account is debited in order to record a decrease in the proprietary interest of the owner of the business; and the credit would be made in order to record a decrease in the asset automobile supplies.

An expense, further, may be incurred without any current payment of cash or other asset. For example, rent expense may be incurred for a particular month even though the actual payment of cash may not be made until a later month. Still another example of an expense which does not involve cash is the value consumed by the "wearing out" of depreciable assets; this is a depreciation expense.

Noncash expenses are discussed in further detail in Chapters 12 and 13.

The Journal and Ledger of Floyd L. Smith

The income and expense transactions of Mr. Smith on pages 46 and 48 have been individually journalized and explained for teaching purposes. Actually, these transactions would be recorded in the journal in chronological order.

In order to bring all of the transactions of Mr. Smith for December together (as individually described on pages 31, 46, and 48), their record in the journal of Mr. Smith for the month of December, 19__, is shown below. Also shown is the ledger of Mr. Smith after the journal has been posted.

JOURNAL — Page 1

19__					
Dec.	1	Office Equipment	4	100.00	
		Cash	1		100.00
		To record purchase of adding machine.			
		Rent Expense	16	100.00	
		Cash	1		100.00
		To record payment of rent for December.			
	4	Floyd L. Smith, Capital	8	1,000.00	
		Cash	1		1,000.00
		To record withdrawal of capital.			
	5	General Expense	15	20.00	
		Cash	1		20.00
		To record fee, City Realtors' Association.			
	9	Harley Sales Co.	6	200.00	
		Cash	1		200.00
		To record payment of November account.			
	10	Office Equipment	4	500.00	
		Harley Sales Co.	6		500.00
		To record purchase of office safe.			
	11	Cash	1	1,000.00	
		Marketable Securities	3		1,000.00
		To record sale of securities at a price equal to their cost.			
	15	Automobile	5	1,000.00	
		Cash	1		400.00
		Notes Payable	7		600.00
		To record purchase of used car.			
	16	Cash	1	10.00	
		Miscellaneous Income	12		10.00
		To record rental of calculating machine.			
	17	Cash	1	1,000.00	
		Commission Income	10		1,000.00
		To record 5% commission on sale of $20,000.00.			
	18	Marketable Securities	3	2,000.00	
		Cash	1		2,000.00
		To record purchase of 100 shares of Brookfield Baking Company stock.			
	20	Cash	1	70.00	
		Commission Income	14		70.00
		To record commission earned on sale of fire insurance policy.			
	21	Advertising Expense	13	70.00	
		Cash	1		70.00
		To record payment of advertising bill.			
	24	Commission Expense	14	110.00	
		Cash	1		110.00
		To record salesmen's commissions.			
	30	Cash	1	20.00	
		Dividend Income	11		20.00
		To record dividend check.			

LEDGER

Asset accounts

CASH 1

19—					19—				
Nov.	30	Balance		3,900.00	Dec.	1		J1	100.00
Dec.	11		J1	1,000.00				J1	100.00
	16		J1	10.00		4		J1	1,000.00
	17		J1	1,000.00		5		J1	20.00
	20		J1	70.00		9		J1	200.00
	30		J1	20.00		15		J1	400.00
						18		J1	2,000.00
						21		J1	70.00
						24		J1	110.00

JAMES E. NELSON 2

19—									
Nov.	30	Balance		300.00					

MARKETABLE SECURITIES 3

19—					19—				
Nov.	30	Balance		1,000.00	Dec.	11		J1	1,000.00
Dec.	18		J1	2,000.00					

OFFICE EQUIPMENT 4

19—									
Nov.	30	Balance		1,000.00					
Dec.	1		J1	100.00					
	10		J1	500.00					

AUTOMOBILE 5

19—									
Dec.	15		J1	1,000.00					

Liability accounts

HARLEY SALES CO. 6

19—					19—				
Dec.	9		J1	200.00	Nov.	30	Balance		200.00
					Dec.	10		J1	500.00

NOTES PAYABLE 7

19—									
					Dec.	15		J1	600.00

Net worth accounts

FLOYD L. SMITH, CAPITAL 8

19—					19—				
Dec.	4		J1	1,000.00	Nov.	30	Balance		6,000.00

9

Income accounts (i.e., divisions of the credit side of the Capital account)

COMMISSION INCOME 10

19—							
Dec.	17					J1	1,000.00
	20					J1	70.00

DIVIDEND INCOME 11

19—							
Dec.	30					J1	20.00

MISCELLANEOUS INCOME 12

19—							
Dec.	16					J1	10.00

Expense accounts (i.e., divisions of the debit side of the Capital account)

ADVERTISING EXPENSE 13

19—							
Dec.	21			J1	70.00		

COMMISSION EXPENSE 14

19—							
Dec.	24			J1	110.00		

GENERAL EXPENSE 15

19—							
Dec.	5			J1	20.00		

RENT EXPENSE 16

19—							
Dec.	1			J1	100.00		

The Recording and Classification of Incomes and Expenses

Except for transactions involving the sale of merchandise, it is common practice for income transactions—as a matter of bookkeeping convenience—to be credited to income accounts at the time of their collection, although to this general practice there are some important exceptions (as described in Chapters 13 and 14). As to transactions involving the sale of merchandise, it is general practice to record *all* sales of merchandise as revenue earned on the date when the sale is made.

It is also common practice for expense transactions—again as a matter of bookkeeping convenience—to be debited to expense accounts at the time of their payment rather than at the date of their incurrence, although, again, to this general practice there are some important exceptions (as described in Chapters 13, 14, and 21).

Questions may sometimes arise as to whether certain expenditures should be debited to an expense account or to an asset account as, for example, expenditures made for fuel, gasoline, postage, small purchases of office supplies, and so on. A good working rule for use in cases like these is the following: *Assets which are of small value, or which require frequent replacement, or whose values are short-lived, should be debited to expense accounts rather than to asset accounts.*

All Incomes and Expenses Are Finally Transferred to an Ownership-Equity Account of the Balance Sheet

Since income and expense accounts are only temporary subdivisions of the Capital account of a single proprietorship, it follows that, ultimately, the balances of these accounts will be transferred to the Capital account. Actually, if incomes exceed expenses, only the difference (representing the net income of the business for the period) will be credited to the Capital account. If expenses exceed incomes, the difference (representing the net loss of the business for the period) will be debited to the Capital account. This transferring process, known as "closing the books," generally occurs but once a year—at the end of a fiscal accounting period of twelve months. The majority of businesses operate on a calendar year basis. These businesses, therefore, "close their books" as of December 31 of each year. (The detailed bookkeeping procedures for "closing the books" of a business are described and illustrated in Chapters 5 and 14.)

When the balances of all income and expense accounts have been transferred, the new balance of the Capital account of a single proprietorship will be the amount of the owner's proprietary interest in the business as of the date marking the close of the accounting period.

For the business of a single proprietorship it is common practice to transfer the net difference between total incomes and total expenses to the Capital account of the business. For the business of a partnership the transfer is made by allocating the net income or net loss to the individual capital accounts of the partners (as described in Chapters 15 and 16); and for corporations the transfer is made by placing the net income or net loss in a special ownership equity account called Retained Income *or* Earned Surplus (as described in Chapters 18–20).

The rule of debit and credit, originally presented on page 31, may now be expanded to show the rule in greater detail, thus:

DEBITS are made in order to record	CREDITS are made in order to record
assets and realized increases in the values of assets	liabilities and increases in the values of liabilities
decreases in liability accounts	decreases in asset accounts
decreases in net worth accounts, i.e., debits to record expenses losses reductions of income withdrawals of invested capital withdrawals of profits	net worth and increases in the values of net worth accounts, i.e., credits to record original contributions of, and later additions to, invested capital incomes

PROBLEMS

Problem 4–1. What are the proper debit and credit accounts to record the following transactions?

1. E. G. Baker starts in business as a barber with an investment of cash, $1,000.00.
2. He purchases equipment for cash from E. H. Lanier, who was retiring from business, $500.00.
3. He pays rent for the first month, $50.00.
4. He issues a check in payment of newspaper advertising announcing the Baker De Luxe Barber Shop, $25.00.
5. He buys a sterilizer on 10-days' credit from the Walker Supply Company, $25.00.
6. He pays union dues, $10.00; and state license fee, $5.00.
7. He deposits $20.00 cash with utility companies as a guarantee that gas, electricity, and water bills will be paid.
8. A traveler's check is cashed for M. G. Anderson, $50.00.
9. A check is mailed to the Walker Supply Company for the amount owed this company (see transaction 5).
10. A used cash register is purchased from the Sperry-Rand Company for $75.00. A down payment of $15.00 is made. The balance is to be paid at the rate of $10.00 monthly.
11. Tonics and lotions are purchased for cash from the Zenith Company, $10.00.
12. Magazine and newspaper subscriptions are paid, $21.00.
13. Collected $465.00 for tonsorial services rendered to customers.
14. Paid wages to John A. King, as assistant barber, $150.00.
15. Bills for electricity, gas, and water are paid, $21.00.

Problem 4–2. How should the following transactions be recorded?

1. Commissions are paid to salesmen, $2,500.00.
2. A check for $22.00 is given to the Cardinal Service Station in payment of gasoline purchases for this month.

3. Trees and bushes are purchased on credit from Wales & Company for $220.00; these trees and bushes are to be placed on the land on which the business is located.
4. Interest of $50.00 is collected on a short term note.
5. A credit memorandum for $20.00 is received to correct an error in the invoice received from Wales & Company in transaction 3.
6. A commission of $25.00 is collected from James Franklin & Sons for services rendered yesterday.
7. A contract to paint the building is signed, work to commence on the first of next month. The cost of the work is fixed at $2,700.00. (Questions: Has an asset been acquired? Has the balance sheet been changed, that is, is this transaction an accounting transaction?)
8. Rent for the current month is paid, $300.00.
9. Window display materials are purchased for cash, $25.00.
10. A bill for a new automobile battery is received from the Belmont Battery Service, $13.00. Payment is made immediately.
11. A check is issued in payment of an automobile license, $19.00.
12. A cash register is purchased on 6 months' credit from the National Cash Register Company, $125.00.
13. Miscellaneous office supplies are purchased from the Broadway Office Supply Company for cash, $8.00.
14. A check for $100.00 is given to the Red Cross.
15. Cash is collected on the account of E. A. Chester & Company covering merchandise sold this company two months ago, $112.00.
16. Paid interest expense on our bank loan, $60.00.
17. A check for $90.00 is given to the *Daily Times* in payment of advertising for the past week.
18. A check for $200.00 is mailed to Wales & Company in payment of their account (see transactions 3 and 5).
19. The telephone bill is paid, $18.00.
20. A cash dividend is received on 100 shares of stock of the American Telephone & Telegraph Company, $225.00.
21. A bookkeeping system is installed by John R. Chase, accountant; he is paid $100.00.
22. A subscription to the *U. S. News & World Report* is paid, $5.00.
23. A cash loan is made to an employee, Roy H. Knox. The loan is to be repaid in 60 days, $500.00.
24. A quart of white enamel paint is purchased for cash, $3.00.

Problem 4–3. What are the proper debit and credit accounts to record the following transactions for December?

1. $5,000.00 cash is borrowed from the Marine National Bank. A note for 60 days is signed in favor of the bank.
2. Office salaries are paid, $2,000.00.
3. A year's subscription to the *Wall Street Journal* is paid, $20.00.
4. Office equipment is purchased on credit from Coyle & Dameron, Inc., $300.00.

5. A check is given to the Community Chest, $50.00.
6. 500 shares of the common stock of the Katz Drug Company are purchased on December 9 for cash, $10,000.00.
7. The telephone bill is paid for December, $12.00.
8. Wages are paid, $3,000.00.
9. Commissions are paid to salesmen, $400.00.
10. Rent for December is paid, $200.00.
11. A railroad ticket is purchased for cash for the use of one of our salesmen, $67.00.
12. The account of Coyle & Dameron, Inc., is paid (see transaction 4).
13. A dividend check is received on the 29th on the stock of the Katz Drug Company, $100.00.
14. The railroad ticket purchased in transaction 11 is not used. A refund is received for the full purchase price of the ticket.

Problem 4–4. What are the proper debits and credits to record the following transactions for December?

1. John A. Bressler starts in business with cash, $7,000.00, and merchandise, $8,000.00.
2. Paid rent for December, $100.00.
3. Bought office equipment from the Central Office Equipment Company, $500.00. A down payment of $100.00 is made on this purchase. The balance is to be paid in monthly installments of $100.00.
4. A bill from the Perry Sign Company is paid, $25.00. This bill was for lettering placed on the window.
5. Three salesmen are hired today at salaries of $300.00 per month each.
6. The floors are refinished at a cash cost of $200.00.
7. A small delivery truck is purchased for cash, $1,500.00. This was a used truck.
8. A spotlight with mirror is installed on the truck at a cash cost of $25.00.
9. A truck license is purchased for cash, $25.00.
10. Various kinds of office supplies are purchased for cash from the Whitney Office Supplies Company, $33.00. These supplies are estimated to represent the requirements for December.
11. Newspaper advertising for December is paid, $139.00.
12. Collected $1,250.00 in cash for brokerage and commission services rendered to customers.
13. Office supplies are returned to the Whitney Office Supplies Company, $8.00. They give us credit but no cash.
14. A cash loan of $500.00 is made to a customer, James L. Briggs. This loan is represented by a note for 60 days.
15. Wages and salaries are paid, $1,000.00.

Chapter 5

TRIAL BALANCE / FINANCIAL STATEMENTS / CLOSING THE BOOKS

Introduction

In the preceding four chapters emphasis has been given to the fact that the balance sheet must always be in balance and to the second fact that the debit and credit values of an accounting transaction must always be equal to each other. Therefore, since the asset values of a ledger must be balanced by an equal amount of claims against them, it follows that the sum of the debits in a ledger must always be equal to the sum of the credits. It follows also that the sum of the debit balances of the accounts of a ledger must always be equal to the sum of the credit balances of the accounts.

Preliminary to the preparation of financial statements and preliminary, also, to the "closing of the books," a bookkeeper usually makes sure that the total debits of his ledger are equal to the total of the credits. He does this by ascertaining that the sum of the debit balances of accounts is equal to the sum of the credit balances of accounts. He lists each account on a page which has provision for two columns at the right. If the account has a debit balance, the amount of the debit balance is entered in the first, or debit, column; if the account has a credit balance, the amount of the credit balance is entered in the right, or credit, column. The sums of the two columns should be equal to each other. This test of the accuracy of the accounts, the equality of debits and credits, is called a "trial balance."

A trial balance, in itself, does not give assurance that the accounting record of transactions for a period has been accurate. A trial balance may be in balance even though serious accounting errors may have occurred in the accounts. A debit value, for example, may have been entered on the debit side of the wrong account. A trial balance proves one thing only: that, arithmetically, the total of the debit balances of a ledger is equal to the total of the credit balances.

Since many businesses find it worth while to prepare and use monthly financial statements, it is customary for bookkeepers to prepare a trial balance at the end of each month. To a bookkeeper a monthly trial balance

serves several purposes: (1) It provides him with proof of the fact that the total of the debit balances of accounts is equal to the total of the credit balances of accounts. (2) If the trial balance at the end of a particular month does not balance, the error is confined to that month and, accordingly, it is not necessary to search the records of previous months. This is true provided a trial balance had been taken at the close of the previous month and was in balance. (3) The balance of each account in the ledger is established. These balances are useful in preparing the financial statements of a business.

All trial balances following the trial balance for the first month of a fiscal year contain account balances drawn off on a cumulative basis. The trial balance at the end of February, for example, would contain the cumulative values for January and February; the trial balance at the end of March would contain the cumulative values for January, February, and March; and so on.

Trial Balance of Floyd L. Smith

The trial balance of Floyd L. Smith, December 31, 19__, prepared from the ledger on page 51, will be

Floyd L. Smith

TRIAL BALANCE, DECEMBER 31, 19__

Accounts	*Debit Balances*	*Credit Balances*
Cash	$2,000.00	
James E. Nelson	300.00	
Marketable Securities	2,000.00	
Office Equipment	1,600.00	
Automobile	1,000.00	
Harley Sales Co.		$ 500.00
Notes Payable		600.00
Floyd L. Smith, Capital		5,000.00
Commission Income		1,070.00
Dividend Income		20.00
Miscellaneous Income		10.00
Advertising Expense	70.00	
Commission Expense	110.00	
General Expense	20.00	
Rent Expense	100.00	
	$7,200.00	$7,200.00

The accounts of this trial balance appear in the order in which the accounts appear in the ledger. It should be obvious, however, that the equality of the trial balance would not be affected by the particular order in which the accounts were listed. If all the accounts of the ledger were listed, the trial balance would be in balance whatever the order of accounts.

In practice, the column headings shown above are omitted from trial balances.

The Statement of Income

After a trial balance has been prepared, the usual order of work is as follows:

1. The preparation of the statement of income.
2. The preparation of the balance sheet.
3. The formal closing of the books (done only at the end of the accounting year).

The purpose of the statement of income is to report the amount of net income which has been earned by a business over a given period of time, and to explain in significant and systematized detail how this net income was earned. Using all income and expense accounts of the trial balance, the statement of income for the business of Floyd L. Smith would be as follows:

Floyd L. Smith

STATEMENT OF INCOME FOR THE MONTH OF DECEMBER, 19__

Commission Income		$1,070.00
Less Expenses:		
Advertising Expense	$ 70.00	
Commission Expense	110.00	
General Expense	20.00	
Rent Expense	100.00	300.00
Net Income from Operations		$ 770.00
Other Income:		
Dividend Income	$ 20.00	
Miscellaneous Income	10.00	30.00
Net Income		$ 800.00

The period covered by a statement of income may be one month, three months, six months, twelve months, or some other selected period of time. The year is a common period. While a statement of income may be prepared for any specific period of time, the accounts of a business are usually "closed" but once a year, either as of December 31, 19__, or as of the last day of the fiscal period when the latter is not the calendar year. The actual procedures for "closing" the accounts of a business are described in the later pages of this chapter.

The term "statement of income" is a modern title, widely and increasingly used in contemporary accounting. It is used by such prominent companies as the American Can Company, General Motors Corporation, Holly Sugar Corporation, and the United States Steel Corporation. The statement of income may also appear under other titles such as

Statement of income and expense
Income statement
Profit and loss statement
Summary of income

The term "profit and loss statement" is one whose history of use is long, the term "profit and loss" having been used as early as 1494. In recent years the practice of professional public accounting has shown a definite tendency to substitute the term "statement of income" for the term "profit and loss statement."

In all of these income statements, there is general agreement among accountants that the gross income from the major activity or operation of a business should be listed first, the expenses of producing this income deducted to yield net profit from operations. Other miscellaneous incomes are then added and other miscellaneous expenses are deducted to yield net income.

The Balance Sheet

The second statement of interest to the proprietor of a business is the balance sheet. In this statement the assets and equities of a business are systematically arranged and totaled. The balance sheet is simply an orderly presentation, in the form of a written report, of the asset, liability, and net worth accounts of a business. The balance sheet is generally prepared by working from the trial balance.

The balance sheet of the business of Floyd L. Smith, December 31, 19__, prepared from the trial balance on page 58, is as follows:

Floyd L. Smith

BALANCE SHEET, DECEMBER 31, 19__

Assets			*Liabilities and Net Worth*		
Current Assets:			Current Liabilities:		
Cash		$2,000.00	Accounts Payable		$ 500.00
Accounts Receivable		300.00	Notes Payable		600.00
Marketable Securities		2,000.00			$1,100.00
		$4,300.00	Net Worth:		
Fixed Assets:			Floyd L. Smith, Capital		5,800.00
Office Equipment	$1,600.00				
Automobile	1,000.00	2,600.00			
		$6,900.00			$6,900.00

It is important to observe that the net worth of Floyd L. Smith in this balance sheet is determined as follows:

Balance of the Floyd L. Smith, Capital account as per the trial balance, December 31, 19__	$5,000.00
Add Net income for the month of December, 19__	800.00
Balance of the Floyd L. Smith, Capital account as per the balance sheet, December 31, 19__	$5,800.00

The Work Sheet

The statement of income and the balance sheet on pages 59 and 60, respectively, were prepared by working directly from the trial balance on page 58. Income and expense accounts were placed in the statement of income. Assets, liabilities, and net worth were placed in the balance sheet. Each account of the trial balance, therefore, was classified as either a statement of income item or a balance sheet item.

To speed up the classification of accounts, and as a convenient and orderly process for expediting the preparation of financial statements, the "work sheet" may be used. In the first pair of columns of the work sheet the trial balance is recorded. In the second pair of columns are recorded the balances of accounts (i.e., incomes and expenses) which make up the statement of income. In the third pair of columns are recorded the balances of accounts (i.e., asset, liability, and net worth) which make up the balance sheet. The net result, therefore, is to distribute the values of the trial balance into either the profit and loss columns or the balance sheet columns of the work sheet. The financial statements are prepared from the information contained in these two sets of columns, respectively.

The work sheet does not replace the statement of income and the balance sheet. It is simply an auxiliary procedure which has the function of assisting in the preparation of financial statements.

The work sheet for the Floyd L. Smith problem would be as follows:

Floyd L. Smith

WORK SHEET, DECEMBER 31, 19__

	TRIAL BALANCE		PROFIT AND LOSS		BALANCE SHEET	
	Dr.	*Cr.*	*Dr.*	*Cr.*	*Dr.*	*Cr.*
Cash	2,000.00				2,000.00	
James E. Nelson	300.00				300.00	
Marketable Securities	2,000.00				2,000.00	
Office Equipment	1,600.00				1,600.00	
Automobile	1,000.00				1,000.00	
Harley Sales Co.		500.00				500.00
Notes Payable		600.00				600.00
Floyd L. Smith, Capital		5,000.00				5,000.00
Commission Income		1,070.00		1,070.00		
Dividend Income		20.00		20.00		
Miscellaneous Income		10.00		10.00		
Advertising Expense	70.00		70.00			
Commission Expense	110.00		110.00			
General Expense	20.00		20.00			
Rent Expense	100.00		100.00			
	7,200.00	7,200.00				
Net Income *to* Floyd L. Smith, Capital			800.00			800.00
			1,100.00	1,100.00	6,900.00	6,900.00

The difference between the incomes and expenses listed in the profit and loss columns of the work sheet is the net income of the period, $800.00. Since this net income increases the net worth of the proprietor, it is transferred to his capital account by placing a debit of $800.00 in the profit and loss columns and a credit in the balance sheet columns. More formally, this transfer of net income reflects the bookkeeping entry closing the Profit and Loss account (see entry, page 64).

General Comments on Financial Statements

Financial statements can be "fairly stated" only if the balances of the accounts on which they rest are fairly stated and provided, also, that the balances of these accounts have been correctly classified for statement purposes. For example, the debit for a particular transaction intended for a particular account of the ledger may unintentionally have been placed in the wrong account. This error, however, would not cause the trial balance to be out of balance. It is also possible for the trial balance to be in balance and yet be in error from an *accounting* standpoint because one or more of the debit or credit values for transactions were improperly analyzed, classified, and recorded. This point may be illustrated as follows:

Assume that the expenditure for advertising, $70.00, of the Floyd L. Smith problem (page 48) was erroneously considered to be an asset instead of an expense. In this kind of circumstance the asset account would be overstated $70.00 and the expense account understated $70.00. The trial balance, however, would be in balance. Further, on the basis of these wrong account balances, the net income of the business would be wrongly stated as $870.00 instead of $800.00. On the balance sheet two errors would be present: the expenditure for advertising would be included with the assets, and the net worth of Floyd L. Smith would be wrongly stated at $5,870.00—an actual overstatement of $70.00. In spite of these two errors, however, the balance sheet would be in balance.

Closing the Books

The process of transferring the balances of the income and expense accounts to the Capital account of a single proprietorship at the end of the accounting period is called "closing the books." Books are generally "closed" at the end of the accounting year. The process of "closing the books" is fundamentally simply the transfer of the debit balances of expense accounts to the debit side of the Capital account, and the transfer of the credit balances of income accounts to the credit side of the Capital account.

In bookkeeping practice these transfers of account balances to the ownership-equity account of a business are made by way of the Profit and Loss account, as described in the next paragraph.

Profit and Loss Account

Instead of closing the income and expense accounts of a business directly to the owner's Capital account (or other ownership-equity accounts as would be the case for partnerships and corporations) at the end of the accounting period, additional convenience and information will be attained if these accounts are first transferred to a *summary* account called Profit and Loss account. When all incomes and expenses have been systematically brought together in this account, the balance of the Profit and Loss account will then represent the net income or the net loss of the business for the accounting period. The balance of the Profit and Loss account, in turn, is transferred to the Capital account of the owner of a proprietorship business (or to other ownership-equity accounts as would be the case for partnerships and corporations).

There are two advantages in using a Profit and Loss account:

1. A summary account is provided in which all elements of income and expenses are gathered together to show the net income or net loss of a business for an accounting period.
2. The Capital account (or the equivalent ownership-equity accounts of partnerships and corporations) is not cluttered up with many miscellaneous debits and credits. Only the net income or the net loss of an accounting period is transferred to it.

The function of the Capital account of a single proprietorship is fundamentally that of representing invested capital. With this function it is therefore proper to limit the entries in the Capital account to those which represent *significant* changes in net worth, i.e., additional capital investments, withdrawals of invested capital, and the recording of net income or net loss.

Since the Profit and Loss account is a *summary* account it follows that no accounting transaction should ever be directly recorded in the Profit and Loss account.

Closing the Books (*Continued*)

To abide by the rule that for every debit entry there must be a credit entry of equal value and in order to promote bookkeeping accuracy in the accounts, the balances of income and expense accounts are transferred to the Profit and Loss account by making full utilization of the rule of double entry. Thus, in transferring the debit balance of $70.00 in the Advertising

Expense account to the debit side of the Profit and Loss account, the new debit is offset by making a credit of $70.00 in the Advertising Expense account. Similarly, in transferring the credit balance of $1,070.00 in the Commission Income account to the credit side of the Profit and Loss account, an offsetting debit of $1,070.00 is made in the Commission Income account. Other income and expense accounts would be transferred to Profit and Loss in a similar manner. Income and expenses are "closed" when they no longer have balances.

In closing the books, then, income accounts are debited and the Profit and Loss account is credited; each debit cancels out the existing credit balance of an income account. And expense accounts are credited and the account with Profit and Loss is debited; each credit cancels out the existing debit balance of an expense account. In the language of accounting, the debits and credits made to the Profit and Loss account may be explained as follows: The debits are made to decrease one or more elements of net worth, and the credits are made to increase one or more elements of net worth.

While the balances of income and expense accounts may be transferred individually or by groups of like accounts to the Profit and Loss account, it is common bookkeeping practice to make the transfers as quickly and directly as possible. Income accounts are debited, expense accounts are credited, and Profit and Loss is credited (or debited) for the difference between the two groups of accounts. In the Floyd L. Smith problem, the accounts would be closed by posting the entries shown in the journal below.

JOURNAL 2

19—					
Dec.	31	Commission Income	10	1,070.00	
		Dividend Income	11	20.00	
		Miscellaneous Income	12	10.00	
		Advertising Expense	13		70.00
		Commission Expense	14		110.00
		General Expense	15		20.00
		Rent Expense	16		100.00
		Profit and Loss	9		800.00
		To transfer balances of income and expense accounts to Profit and Loss.			
		Profit and Loss	9	800.00	
		Floyd L. Smith, Capital	8		800.00
		To transfer balance of Profit-and-Loss account to Floyd L. Smith, Capital account.			

After these entries have been posted, the income and expense accounts of the business of Floyd L. Smith would be "closed." The ledger of Floyd L. Smith, after closing, follows. A graphic summary of the closing process appears on page 67.

LEDGER

CASH 1

19—						19—				
Nov.	30	Balance		3,900.00		Dec.	1		J1	100.00
Dec.	11		J1	1,000.00					J1	100.00
	16		J1	10.00			4		J1	1,000.00
	17		J1	1,000.00			5		J1	20.00
	20		J1	70.00			9		J1	200.00
	30		J1	20.00			15		J1	400.00
							18		J1	2,000.00
							21		J1	70.00
							24		J1	110.00

JAMES E. NELSON 2

19—										
Nov.	30	Balance		300.00						

MARKETABLE SECURITIES 3

19—						19—				
Nov.	30	Balance		1,000.00		Dec.	11		J1	1,000.00
Dec.	18		J1	2,000.00						

OFFICE EQUIPMENT 4

19—										
Nov.	30	Balance		1,000.00						
Dec.	1		J1	100.00						
	10		J1	500.00						

AUTOMOBILE 5

19—										
Dec.	15		J1	1,000.00						

HARLEY SALES CO. 6

19—						19—				
Dec.	9		J1	200.00		Nov.	30	Balance		200.00
						Dec.	10		J1	500.00

NOTES PAYABLE 7

						19—				
						Dec.	15		J1	600.00

FLOYD L. SMITH, CAPITAL 8

19—						19—				
Dec.	4		J1	1,000.00		Nov.	30	Balance		6,000.00
						Dec.	31		J2	800.00

PROFIT AND LOSS 9

19— Dec.	31			J2	800.00	19— Dec.	31			J2	800.00

COMMISSION INCOME 10

19— Dec.	31			J2	1,070.00	19— Dec.	17			J1	1,000.00
							20			J1	70.00
					1,070.00						1 070.00

DIVIDEND INCOME 11

19— Dec.	31			J2	20.00	19— Dec.	30			J1	20.00

MISCELLANEOUS INCOME 12

19— Dec.	31			J2	10.00	19— Dec.	16			J2	10.00

ADVERTISING EXPENSE 13

19— Dec.	21			J1	70.00	19— Dec.	31			J2	70.00

COMMISSION EXPENSE 14

19— Dec.	24			J1	110.00	19— Dec.	31			J1	110.00

GENERAL EXPENSE 15

19— Dec.	5			J1	20.00	19— Dec.	31			J2	20.00

RENT EXPENSE 16

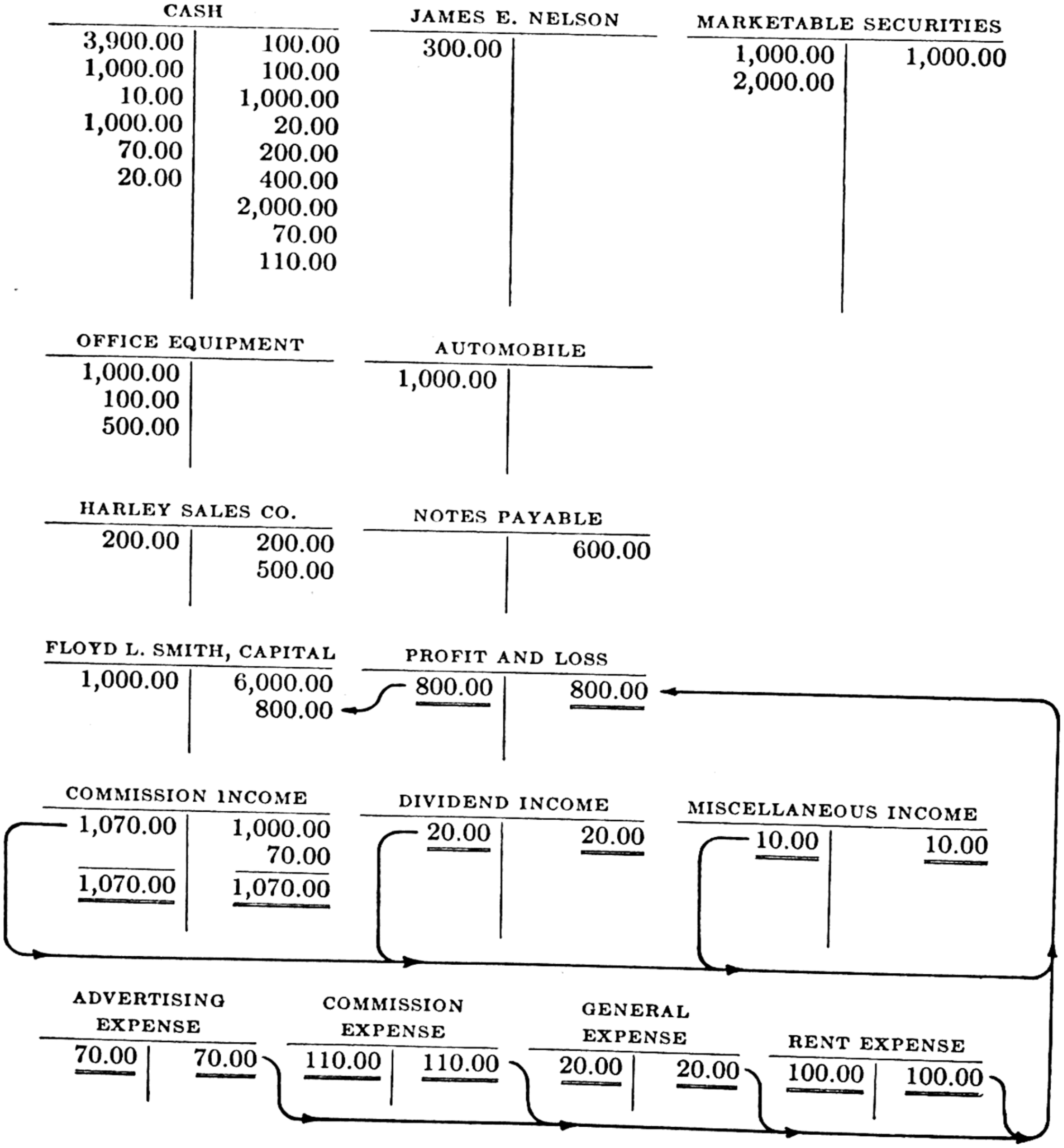
19— Dec.	1			J1	100.00	19— Dec.	31			J2	100.00

It should be observed that, after the books (i.e., the accounts) of a business have been "closed," the only accounts which still have balances are those accounts representing assets, liabilities, and ownership equities.

Parenthetically, it is proper to direct attention to the desirability of ruling statements and accounts correctly. Correct rulings are shown in the illustrations of this chapter.

Graphic Summary

The ledger of Floyd L. Smith is represented by the T accounts shown below. The effect of closing entries and the flow of information from account to account can be traced by following the arrows shown.



Balance Sheet, Profit and Loss, and Mixed Accounts

Balance sheet accounts are the asset, liability, and proprietary accounts of a business at a particular date. These accounts—the accounts of the balance sheet—are sometimes also called "real" accounts.

Profit and loss accounts are the *temporary* subdivisions of an ownership-

equity account, i.e., those accounts which increase or decrease the net income of a business. These accounts—the accounts of the statement of income—are sometimes also called "nominal" accounts.

Mixed accounts are those which contain values relating to both the balance sheet and the statement of income. For example, the Small Tools account of a business may show a balance of $500.00 on the ledger. A physical inventory at the end of the year, however, shows that the inventory of tools on hand is $400.00, the difference of $100.00 being explained as having been consumed in the manufacture of goods. The Small Tools account, at this date, represents an asset of $400.00 and an expense of $100.00—balance sheet and profit and loss values, respectively. Accordingly, the asset of $400.00 will appear on the balance sheet and the expense of $100.00 will appear on the statement of income. The "real" element of a mixed account, therefore, is carried to the balance sheet and the "nominal" element is carried to the statement of income.

PROBLEMS

Problem 5–1. On December 1, 19__, John D. Scott began business with cash, $9,000.00, and securities, $10,500.00. His condensed transactions for the month of December were as follows:

1. Paid rent, $100.00.
2. Purchased land from S. J. Clark, $7,000.00. Paid cash of $2,000.00, the first mortgage balance of $5,000.00 to be paid within two years.
3. Paid advertising bills, $300.00.
4. Paid various general expenses, $100.00.
5. Earned commissions of $800.00, of which $400.00 was immediately collected in cash.
6. Collected a dividend check, $200.00.

Required

1. Enter the above transactions in appropriate T accounts.
2. Trial balance, December 31, 19__.
3. Statement of income for the month ended December 31, 19__.
4. Balance sheet, December 31, 19__.
5. What are the journal entries to "close" the accounts of Mr. Scott, December 31, 19__?

Problem 5–2. On December 1, 19__, John L. Taylor organized a real-estate brokerage business. On December 31, 19__, the accounts comprising his trial balance were as follows:

Cash	$3,000.00
Office Equipment	500.00
Automobile	2,500.00
John L. Taylor, Capital	5,000.00
Commission Income	3,000.00

Advertising Expense	300.00
Automobile Expense	50.00
Commission Expense	1,150.00
License Fee	10.00
Office Salaries	250.00
Office Supplies (expense)	40.00
Rent Expense	150.00
Utilities Expense	50.00

Required

1. Trial balance, December 31, 19__.
2. Statement of income for the month ended December 31, 19__.
3. Balance sheet, December 31, 19__.

Problem 5–3. Following is the trial balance of the Green Meadow Golf Club at the end of the year 19__:

Cash	$ 21,000.00	
Dues Receivable from Members	5,000.00	
Caddy and Locker House	10,000.00	
Main Building	30,000.00	
Miscellaneous Equipment	12,000.00	
Cost of Construction of Golf Course	45,000.00	
Accounts Payable		$ 1,000.00
Notes Payable		10,000.00
John C. Miller, Capital		100,000.00
Income from Dues		50,000.00
Income from Green Fees, Locker Rents, etc.		15,000.00
Maintenance Expense	6,000.00	
General Expense	20,000.00	
Wages and Salaries	24,000.00	
Property Taxes	2,000.00	
Interest Expense	1,000.00	
	$176,000.00	$176,000.00

Required

1. Statement of income for the year ended December 31, 19__.
2. Balance sheet, December 31, 19__.

Problem 5–4. L. H. Carter was the publisher of a weekly professional newspaper called the *Business News*. On December 31, 19__, the ledger revealed the following accounts:

Accounts Receivable	$ 3,356.00
Salaries and Wages	25,685.00
Legal Fees	2,000.00
Miscellaneous Equipment	20,288.00
L. H. Carter, Capital	30,000.00
Freight and Express (expense)	5,160.00
Advertising Income	31,991.00
Subscription Income	50,010.00
Miscellaneous Expense	2,960.00
Office Equipment	3,145.00
Cash	15,316.00
Telephone and Telegraph	654.00

Insurance Expense	111.00
Advertising and Promotion Costs	2,110.00
Taxes Expense	1,024.00
Accounts Payable	12,669.00
Fees, Taxes, Royalties, and Other Miscellaneous Items Payable	6,393.00
Inventories of Sheets, Paper, Stock, Supplies	11,957.00
Cost of paper, printing, etc. (costs consumed in publishing the newspaper)	33,479.00
Rent Expense	2,000.00
Stationery and Postage Expense	1,818.00

Required

1. Trial balance, December 31, 19__.
2. Statement of income for the year ended December 31, 19__.
3. Balance sheet, December 31, 19__. Use the account form of statement.

Problem 5–5. Mr. Fred L. Sperry was the owner of the Sperry Arms, an apartment house in Colby City, Ohio. At the end of the calendar year 19__ the books of the Sperry Arms showed the following accounts:

Advertising Expense	$ 462.00
Building	96,000.00
Cash	1,401.00
Gas, Electricity, Water Expense	2,678.00
Furniture and Equipment	17,084.00
Garbage Expense	135.00
General Expense	451.00
Insurance Expense	610.00
Interest Expense	1,500.00
Labor	2,852.00
Land	10,000.00
Meter Deposits with Utility Companies	200.00
Mortgage Payable	25,000.00
Rents Collected	20,084.00
Repairs	2,701.00
Returnable Cash Deposits of Tenants (covering utilities, etc.)	100.00
Security Furniture Company (unpaid balance due this company on purchase of furniture)	1,635.00
Superintendent's Salary	2,500.00
Supplies Expense	1,068.00
Taxes Expense	2,180.00
Fred L. Sperry, Capital	?

Required

1. A trial balance from the above information. You are required to calculate the balance which should be in Mr. Sperry's capital account.
2. Statement of income for the year ended December 31, 19__.
3. Balance sheet, December 31, 19__.

Problem 5–6. Following are financial data relating to the Williams Investment Company, December 31, 19__:

Cash	$ 15,745.87	
Interest Receivable	1,545.13	
Dividends Receivable	3,417.50	
Notes Receivable	47,248.52	
Marketable Securities	671,891.98	
Office Equipment	4,151.00	
Bank Loans Payable		$300,000.00
John L. Williams, Capital		400,000.00
Dividend Income		65,910.87
Interest Income		3,229.84
Investment Counsel Fees Earned		21,000.00
Profit on Sale of Securities		11,489.39
State Franchise and Other Taxes	5,936.04	
Accounting and Attorney's Fees	7,159.19	
Salaries Expense	16,000.00	
General Expense	8,783.07	
Interest Expense	13,751.80	
Rent Expense	6,000.00	
	$801,630.10	$801,630.10

Required

1. Statement of income for the year ended December 31, 19__.
2. Balance sheet, December 31, 19__.

Problem 5–7. The White Laundry operated entirely on a cash basis. On January 1, 19__, its assets were cash, $10,000.00; equipment, $30,000.00; building, $18,000.00; and land, $2,000.00. There were no liabilities. The owner of the business was Daniel E. White.

In condensed form, the transactions of the White Laundry for the next twelve months were as follows:

1. Collections from customers for laundry services rendered, $55,200.00.
2. Paid for salaries, $10,000.00, and wages, $25,000.00.
3. Paid for supplies and materials used in laundry operations, $4,000.00.
4. Paid for repairs and alterations, $300.00.
5. Paid the Ideal Press, Inc., for printing bills, notices, etc., $220.00.
6. Paid the Carnes Insurance Agency for sundry insurance bills, $500.00.
7. Paid for heat, electricity, and water, $2,000.00.
8. The bill in the fifth transaction should have been for $200.00. A check for $20.00 is received from the Ideal Press, Inc.
9. Paid miscellaneous expenses, $1,500.00.
10. Paid real-estate taxes, $500.00, personal property taxes, $50.00, and social security taxes (employer's *expense*) $1,000.00.
11. The cash in the cash registers was short, $50.00.

Required

1. Enter these transactions in appropriate T accounts.
2. Record the trial balance on a work sheet and complete the work sheet.

3. Statement of income for the year ended December 31, 19__.
4. Balance sheet, December 31, 19__.

Problem 5–8. Frank A. Hosmer was the owner of a professional football team known as the Pennsylvania "Rockets." On August 1, 19__, his assets were comprised of cash, $80,000.00, and football franchise, $20,000.00. During the ensuing football season, his transactions were condensed as follows:

1. Gross income collected, $256,000.00. Of this amount $15,000.00 was disbursed for federal taxes, and $80,000.00 was disbursed as guarantees for visiting teams.
2. Paid salaries, $75,791.00; wages, $6,047.00.
3. Paid for supplies and materials, $10,951.00.
4. Paid for telephone, telegraph, and postage, $1,849.00.
5. Paid for traveling expenses, $16,718.00.
6. Paid for publications and printing, $5,142.00.
7. Paid for laundry services, $1,962.00.
8. Paid for contractual services: insurance premiums, fees of game officials, miscellaneous professional fees, and rentals, $13,881.00.
9. Paid for miscellaneous expenses, $2,253.00.
10. Paid for office expenses, $1,724.00; office salaries, $6,000.00.

Required

1. Enter these transactions in appropriate T accounts.
2. Trial balance, December 31, 19__.
3. Statement of income for the five months ended December 31, 19__.
4. Balance sheet, December 31, 19__.

Problem 5–9. Following are condensed financial data comprising the financial statements of the Hotels Statler, Inc., for the year 19__:

	Thousands of Dollars
Cash	4,501
Accounts Receivable	1,335
Inventory and Operating Supplies	3,037
Hotel Properties, including Furnishings	43,016
Wages and Salaries Payable	252
State, Local, and Miscellaneous Taxes Payable	676
Federal Income Taxes Payable	3,293
Accounts Payable	826
Long-Term Bank Loans	1,200
First Mortgages Payable in 20 years	16,519
Room Sales	14,596
Food and Beverage Sales	16,356
Sales of Other Departments	2,861
Store Rentals, Management Fees, etc.	3,715
Salaries and Wages Expense	13,255
Cost of Food and Beverages Used	5,459
Operating Expenses and Supplies	6,022

Repairs and Maintenance	2,394
Taxes on Property	1,443
Rent, Interest, and Depreciation Expense	2,082
Federal Taxes on Income	3,293
Net Worth	29,123

Required

1. Statement of income for the year ended December 31, 19__.

2. Balance sheet, December 31, 19__. (*Note.* The net worth of $29,123,000 *includes* the net income for the current year ended December 31, 19__.)

3. Is the company's cash position strong or weak? Explain.

4. What is the ratio of the company's fixed assets to all assets? Would you appraise this ratio as being favorable or not? Explain.

Chapter 6

ACCOUNTING PROCEDURES FOR A MERCHANDISING BUSINESS

Introduction

Up to the present time our discussion of accounting method has been limited to the "service" type of business enterprise. There are many kinds of "service" businesses, among which the following may be mentioned:

Advertising agencies
Businesses engaged in the rental and management of real property, i.e., office buildings, apartment houses, hotels, motels, and so on
Businesses engaged in the rental of personal property, i.e., automobiles, machinery, electronic equipment and so on
Insurance agencies
Laundry and dry-cleaning establishments
Personal services ranging from beauty parlors and repair and maintenance businesses to businesses offering their services for research
Private police and detective services
Professional services, i.e., those relating to doctors, dentists, lawyers, accountants, engineers, architects, management consultants
Radio and television stations
Realtors
Telephone, telegraph, and transportation businesses
Theaters

In contrast to these "service" organizations stand those businesses which derive their income through the purchase and sale of merchandise. In some merchandising businesses it is practicable to determine the exact amount of gross profit[1] earned on each item of merchandise sold.[2] As a

[1] The excess of the selling price of an asset over its cost is the "gross profit" realized by the seller. The sale of merchandise for $1,000.00 (original cost, $600.00) involves the earning of a gross profit of $400.00. The terms of sale may be either cash or credit.

[2] This is especially true of businesses engaged in merchandising. However, some of these businesses, and many manufacturing businesses, find it entirely feasible, by the use of the method of perpetual inventory, to determine the cost and gross profit on each individual sale. This accounting is described at length in Chapter 23.

general rule, in cases of this kind, the unit of sale is high in price and the margin of gross profit is relatively large. Examples are automobiles, pianos, refrigerators, household furniture and equipment, industrial and office machines, and real estate.

In most merchandising businesses, however, it is neither expedient nor worth while to calculate the amount of gross profit which has been earned on each sale of merchandise. By a method to be described in this chapter, the average manager of a trading business is satisfied to learn, periodically, the amount of gross profit which has been earned on the *total* of all sales. Between the dates on which these profits are factually determined he does not know, nor is he particularly interested in knowing, the exact gross profits which are being earned on individual sales. During this period he does not know, accurately, what amount of gross profit is being earned on the total sales of the business although he probably has a manager's *estimate* of what the profits are. These several conditions are especially likely to prevail in businesses engaged in the purchase of merchandise for purpose of resale.

The Sales Account

When merchandise is sold at a price in excess of its cost, the debit and credit elements of the transaction are

DEBIT: Accounts Receivable (or Cash) to record the increase in the asset account;

CREDIT: Merchandise to record the reduction in the value of this asset; and

CREDIT: Income to record the gross profit earned on the sale.

In the actual practice of accounting, *these two credit values are generally combined into one single credit value—made to the Sales account.* The explanations of the two credits are the explanation of the single credit to Sales.

In the future, therefore, *all* sales of merchandise will be recorded in the following manner:

DEBIT: Accounts Receivable (or Cash) for the full amount of the sale.

CREDIT: Sales, for the full amount of the sale.

For the purposes of the discussion of this chapter this is the only entry to be made at the time when a sales transaction is being recorded. The cost of the merchandise sold on each individual sale is disregarded in this recording. Later on (at the end of the accounting period), the cost value of *all* merchandise sold will be calculated; this cost value for sales as a *group* will become

the *cost of the merchandise sold* during the accounting period. The difference between Sales and the cost-of-the-merchandise-sold will be the amount of gross profit earned on the total sales of the period.

Under this method of accounting the Sales account is an account in which *only* sales of merchandise are recorded.

If the gross profit earned on a sale of merchandise were recorded in a separate income account, it would follow that—at the end of the accounting period—this income account would be closed to the Profit and Loss account. In place of this income account we now have values for Sales and the cost of these sales. Since the income account would have been closed to the Profit-and-Loss account, it follows that these two new values—those for Sales and the cost-of-these-sales—would also be closed to the Profit and Loss account at the end of the accounting period.

The cost of merchandise sold during an accounting period may be recorded in a Cost of Sales account. The difference between the two accounts, Sales and Cost of Sales, would be the gross profit earned on the sales of an accounting period. Since, together, they are income, these two accounts—at the end of the accounting period—would be closed to the Profit and Loss account.

The Merchandise Inventory and Purchases Accounts

It would be possible to operate the Merchandise Inventory account in such a way that the balance of the account, at all times, would represent the amount of merchandise which is currently on hand. Each sale and purchase of merchandise would be reflected by a change in the balance of the Merchandise Inventory account. But, just as it was inexpedient and unnecessary to calculate gross profit on individual sales (see preceding section), it is similarly inexpedient and unnecessary for most trading concerns to have constantly available the exact value of all merchandise on hand at any and all dates. In fact, ordinary business needs are generally satisfied if the cost value of merchandise on hand is obtained periodically as, for instance, monthly, quarterly, semiannually, or annually. Common business practice is to obtain the value at least once a year.

In the future, therefore, the Merchandise Inventory account of a trading business will have one function only: to represent the value of merchandise on hand *at the end of an accounting period.* The balance in the account will not be changed until the end of the next accounting period, when it will be adjusted to show the value of the merchandise on hand at the end of that period. This adjustment is generally made when the books are being formally closed at the end of an accounting period. As a general rule, no entries will be made in the Merchandise Inventory account in the interval between the end of one period and the end of the next succeeding accounting period.

Since the merchandise on hand at the end of the last accounting period is also the merchandise on hand at the beginning of the next period, the balance of the Merchandise Inventory account during a current period may also be thought of as the merchandise on hand at the beginning of the current period.

To care for the purchases of merchandise made *during* an accounting period, a subdivision of the Merchandise Inventory account is opened. The function of this subdivision—called the Purchases account—is that of receiving all debits for the recording of merchandise purchased during the fiscal year of a business.

This accounting means, basically, that the Merchandise Inventory and Purchases accounts of a business will now be given the following functions:

1. The prime function of the Merchandise Inventory account will be that of reflecting the amount of merchandise on hand at the end of the last fiscal year of a business. This amount, of course, is also the amount of merchandise on hand at the beginning of the current fiscal year of a business.
2. The prime function of the Purchases account will be that of reflecting the amount of all merchandise purchased during the fiscal year of a business. This is merchandise which has been purchased with the intent of selling it to customers.

A detailed illustration of the accounting entries to be used for the recording of the merchandise transactions of a trading business appears on page 79.

The serviceability to management of the information in the Purchases account should be noted. Management, for example, may compare and control the volume of its purchases over a given period of time (week, month, quarter, and so on) with the volume of goods sold (using sales at cost or at their estimated cost). In this way management's control over its investment in inventory can be made highly effective.

Cost of Sales

In order to determine the amount of gross profit which has been earned on the sales of an accounting period, the cost of the merchandise sold in that period must be determined. In the interest of fairly stating the amount of gross profit earned—and the amount of net profit earned as well—the cost of the merchandise sold in an accounting period must be fairly determined. When this cost has been established, the sales revenues of a period will be matched with the costs of the merchandise used in making these sales.

While the cost-of-the-merchandise-sold in an accounting period can be carried under the title of Cost of Goods Sold—and some accountants prefer this title—for accounting purposes it is better to employ the more condensed title of Cost of Sales. The value for Cost of Sales, like the value for

an expense account, is one of the costs incurred by a business in the earning of its net income.

And how is the cost of sales for an accounting period determined?

Assume that Carl M. Perry had an inventory of merchandise on December 31, 1957, of $10,000.00 and that his purchases of merchandise for 1958 were $65,000.00. If there were no merchandise on hand at the close of business, December 31, 1958, the conclusion would be inescapable that *all* the merchandise owned and acquired must have been sold during 1958 and that, therefore, $75,000.00 must represent the cost of the merchandise sold in that year. It is more likely, however, that some unsold merchandise would be on hand, December 31, 1958. Assume that the amount of merchandise on hand, December 31, 1958, was actually $20,000.00. This value would be obtained by making a physical count of all merchandise on hand, December 31, 1958, pricing each item of inventory at its cost, making extensions, and totaling all these extensions.

With the cost value of the new inventory, December 31, 1958, having been established at $20,000.00, the *cost of the merchandise sold* during 1958 must be the difference between $75,000.00 and $20,000.00, or $55,000.00. More formally, the cost of sales for 1958 would be calculated as follows:

Inventory, December 31, 1957	$10,000.00
Add Purchases	65,000.00
Total merchandise available for sale	$75,000.00
Less Inventory, December 31, 1958	20,000.00
Cost of sales	$55,000.00

Illustrative Problem

The balance sheet of the business of Carl M. Perry on December 31, 1957, was

Carl M. Perry

BALANCE SHEET, DECEMBER 31, 1957

Assets		*Capital*	
Cash	$15,000.00	Carl M. Perry, Capital	$25,000.00
Merchandise Inventory	10,000.00		
	$25,000.00		$25,000.00

The transactions of Mr. Perry for the calendar year 1958 were condensed as follows:

1. Sold merchandise for cash, $40,000.00.
2. Sold merchandise on credit to various customers, $60,000.00.
3. Purchased merchandise for cash, $20,000.00.
4. Purchased merchandise on credit from various sellers, $45,000.00.

5. Collected accounts receivable, $50,000.00.
6. Paid accounts payable, $30,000.00.
7. Paid general expenses, $38,000.00.

The entries for these seven transactions appear below:

Entry			
1.	Cash	40,000.00	
	Sales		40,000.00
	To record sales for cash.		
2.	Accounts Receivable	60,000.00	
	Sales		60,000.00
	To record sales on account.		
3.	Purchases	20,000.00	
	Cash		20,000.00
	To record purchases for cash.		
4.	Purchases	45,000.00	
	Accounts Payable		45,000.00
	To record purchases on account.		
5.	Cash	50,000.00	
	Accounts Receivable		50,000.00
	To record collections of customers' accounts.		
6.	Accounts Payable	30,000.00	
	Cash		30,000.00
	To record payments on accounts payable.		
7.	General Expense	38,000.00	
	Cash		38,000.00
	To record payment of expenses.		

After these debit and credit values have been posted, and using T accounts to represent formal accounts, the ledger of the business of Mr. Perry on December 31, 1958, would be

CASH

15,000.00	(3) 20,000.00
(1) 40,000.00	(6) 30,000.00
(5) 50,000.00	(7) 38,000.00

ACCOUNTS RECEIVABLE

(2) 60,000.00	(5) 50,000.00

MERCHANDISE INVENTORY

10,000.00	

ACCOUNTS PAYABLE

(6) 30,000.00	(4) 45,000.00

CARL M. PERRY, CAPITAL

	25,000.00

SALES

	(1) 40,000.00
	(2) 60,000.00

PURCHASES

(3) 20,000.00	
(4) 45,000.00	

GENERAL EXPENSE

(7) 38,000.00	

The trial balance taken from these accounts would be

Carl M. Perry

TRIAL BALANCE, DECEMBER 31, 1958

Cash	$ 17,000.00	
Accounts Receivable	10,000.00	
Merchandise Inventory	10,000.00	
Accounts Payable		$ 15,000.00
Carl M. Perry, Capital		25,000.00
Sales		100,000.00
Purchases	65,000.00	
General Expense	38,000.00	
	$140,000.00	$140,000.00

By actual count and valuation (at cost), the inventory of merchandise on hand, December 31, 1958, is $20,000.00.

The financial statements of the business of Mr. Perry would be

Carl M. Perry

STATEMENT OF INCOME FOR THE YEAR ENDED DECEMBER 31, 1958

Sales		$100,000.00
Cost of Sales:		
Inventory, Dec. 31, 1957	$10,000.00	
Purchases	65,000.00	
	$75,000.00	
Inventory, Dec. 31, 1958	20,000.00	55,000.00
Gross Profit		$ 45,000.00
General Expense		38,000.00
Net Profit		$ 7,000.00

or the statement may be condensed as follows →

Carl M. Perry

STATEMENT OF INCOME FOR THE YEAR ENDED DECEMBER 31, 1958

Sales	$100,000.00
Cost of Sales	55,000.00
Gross Profit	$ 45,000.00
General Expense	38,000.00
Net Profit	$ 7,000.00

Carl M. Perry

BALANCE SHEET, DECEMBER 31, 1958

Assets		*Liabilities and Capital*	
Current Assets:		Current Liabilities:	
Cash	$17,000.00	Accounts Payable	$15,000.00
Accounts Receivable	10,000.00	Capital:	
Merchandise Inventory	20,000.00	Carl M. Perry, Capital	32,000.00
	$47,000.00		$47,000.00

The value for Carl M. Perry, Capital, $32,000.00, in the balance sheet is arrived at as follows:

Capital, December 31, 1957	$25,000.00
Add Net profit for 1958	7,000.00
Capital, December 31, 1958	$32,000.00

It should be observed that, with one exception, the values of the assets and liabilities in the trial balance are also the assets and liabilities of the

balance sheet. The single exception is the value for merchandise inventory, December 31, 1958. This value is obtained, not from the trial balance, but from a source independent of the trial balance or general ledger, i.e., by *actual* count and valuation (at cost).

The information provided by the statement of income should be noted because of its manifest importance to the management of a business. The volume of sales and the profitability of sales may be especially noted and, if the results are not satisfactory, steps may be taken by management to improve its operations in the new accounting period.

A comparison of purchases with the cost of goods sold is useful to management in coordinating and controlling the elements which constitute the merchandising program of a business. Unless management knowingly approves a different policy, a business generally should not purchase more merchandise than it is able to sell. In the normal course of events, the purchases of a business over a fiscal period should be expected to be about equal to the value of its cost-of-goods-sold for the period. Exceptions to this general rule, however, can be expected for an expanding business—whose purchases are likely to exceed the cost of goods sold; and for a declining business—whose purchases are likely to be less than the cost of goods sold.

At all events, proper merchandise accounting, accompanied by proper analysis and interpretation, is important not only to the accountant but to management as well. It is an important aid in making management's control of merchandising operations *effective*.

Illustrative Problem (*Continued*) to Show "Closing Entries"

Since the books of a business must be formally closed at the end of its fiscal year, the Carl M. Perry problem will be continued in order to illustrate the "closing entries" of this business, December 31, 1958.

As the accounts now stand we know

1. the amount of merchandise on hand, December 31, 1957; and
2. the amount of purchases of merchandise made during the year 1958.

The accounts of the ledger must be adjusted, December 31, 1958, so as to show

1. the cost of the merchandise sold during 1958; and
2. the amount of merchandise on hand, December 31, 1958.

The Merchandise Inventory and Purchases accounts together show the total amount of merchandise handled during 1958 and the amount of merchandise to be accounted for. At the end of the year 1958, in order to show this information in one account, the debit balances of the Merchandise Inventory and Purchases accounts should be transferred to the Cost of

Sales account. The actual transfer of information will be effected as follows:

Entry

8.	Cost of Sales		75,000.00	
	Merchandise Inventory			10,000.00
	Purchases			65,000.00
	To close the Merchandise Inventory and Purchases accounts into Cost of Sales.			

With the cost value of the new inventory established at $20,000.00, the cost of all merchandise sold during 1958 must be the difference between $75,000.00 and $20,000.00, or $55,000.00. Accordingly, a credit of $20,000.00 is made to the Cost of Sales account in order to adjust the balance of this account so that it will be equal to the cost of all merchandise disposed of through sale. In order to recognize the asset merchandise on the ledger, a complementary debit of $20,000.00 is made to the Merchandise Inventory account. The full entry is

Entry

9.	Merchandise Inventory		20,000.00	
	Cost of Sales			20,000.00
	To record the inventory of merchandise on hand, December 31, 1958.			

After these values have been placed in the ledger, the various merchandise accounts will appear as follows:

MERCHANDISE INVENTORY

	10,000.00	(8)	10,000.00
(9)	20,000.00		

SALES

		(1)	40,000.00
		(2)	60,000.00

COST OF SALES

(8)	10,000.00	(9)	20,000.00
(8)	65,000.00		

PURCHASES

(3)	20,000.00	(8)	65,000.00
(4)	45,000.00		

The balance of the Cost of Sales account now represents the cost of the merchandise sold during the year; and the balance of the Merchandise Inventory account shows the cost value of the inventory on hand, December 31, 1958. This is as it should be.

It may be noted that the balance of $55,000.00 in the Cost of Sales account represents simply

Beginning inventory + Purchases − Ending inventory = Cost of sales

The remaining entries needed are those to "close" all income and expense accounts. These entries are

Entry

10.	Sales		100,000.00	
	Profit and Loss			100,000.00
	To transfer Sales account to Profit and Loss.			

11.	Profit and Loss	55,000.00		
	Cost of Sales		55,000.00	
	To close Cost of Sales into Profit and Loss.			
12.	Profit and Loss	38,000.00		
	General Expense		38,000.00	
	To close General Expense into Profit and Loss.			
13.	Profit and Loss	7,000.00		
	C. M. Perry, Capital		7,000.00	
	To transfer the net profit of 1958 to C. M. Perry, Capital account.			

After these values have been posted, and using T accounts to represent formal accounts, the ledger of Mr. Perry will appear as shown below. The flow of "closing entry" information from account to account can be traced by following the arrows shown.

CASH

	15,000.00	(3)	20,000.00
(1)	40,000.00	(6)	30,000.00
(5)	50,000.00	(7)	38,000.00

ACCOUNTS RECEIVABLE

(2)	60,000.00	(5)	50,000.00

MERCHANDISE INVENTORY

	10,000.00	(8)	10,000.00
(9)	20,000.00		

ACCOUNTS PAYABLE

(6)	30,000.00	(4)	45,000.00

CARL M. PERRY, CAPITAL

			25,000.00
		(13)	7,000.00

PROFIT AND LOSS

(11)	55,000.00	(10)	100,000.00
(12)	38,000.00		
(13)	7,000.00		
	100,000.00		100,000.00

SALES

(10)	100,000.00	(1)	40,000.00
		(2)	60,000.00
	100,000.00		100,000.00

COST OF SALES

(8)	10,000.00	(9)	20,000.00
(8)	65,000.00	(11)	55,000.00
	75,000.00		75,000.00

PURCHASES

(3)	20,000.00	(8)	65,000.00
(4)	45,000.00		
	65,000.00		65,000.00

GENERAL EXPENSE

(7)	38,000.00	(12)	38,000.00

In concluding this section on "closing entries" it may be stated that some businesses, in their bookkeeping, do not use a Cost of Sales account. The entries which otherwise would be made in the Cost of Sales account would be made, instead, in the Profit and Loss account. Although it does not disclose the cost-of-goods-sold value in the ledger, this bookkeeping nevertheless does yield the same end result because, under both methods, all income and expense accounts are finally transferred to the Profit and Loss account.

Another Illustrative Problem

A further application of the accounting method introduced in this chapter (and in Chapter 5) is illustrated in the solution to the L. T. Robinson problem on page 86. Particular attention should be paid to the new accounts employed in this problem and to the financial statements.

The accounts of this problem have been arranged in the ledger in the order of their appearance on the balance sheet and on the statement of income, respectively. Current assets appear first, then fixed assets, and so on.

Two *additional* new accounts are introduced and used in this problem: (1) Returned Sales and Allowances, and (2) L. T. Robinson, Personal. These two accounts will be discussed briefly.

1. RETURNED SALES AND ALLOWANCES (See entry of December 16.) This account, a subdivision of the Sales account, is opened in order to show in a separate account the amount of

sales returned by customers, and
sales allowances.

Occasionally a customer may be prevailed upon to retain merchandise instead of returning it, provided a reduction is made in the amount of the sales invoice on which the merchandise was billed. A concession of this kind is called an allowance.

The function of the Returned Sales and Allowances account, therefore, is to record direct deductions from sales; and that of the Sales account, gross sales only. Returns and allowances merit careful attention by management because they reduce profits by reducing sales. They may also be accompanied by the incurrence of extra costs involved in the handling of returned merchandise. Furthermore, the sale of returned merchandise may be possible only at a reduction in price. Reasons for excessive sales returns and allowances should be ascertained and measures institute to overcome them.

(When the books of a business are being closed at the end of an accounting period, the Returned Sales and Allowances account, like the Sales account, should be transferred directly to the Profit and Loss account.)

Conversely, the function of the Returned Purchases and Allowances account would be that of recording direct deductions from purchases; and that of the Purchases account, gross purchases only. A sales allowance by the vendor is, of course, a purchase allowance to the vendee.

(When the books of a business are being closed at the end of an accounting period, the Returned Purchases and Allowances account, like the Purchases account, should be transferred directly to the Cost of Sales account.)

2. L. T. ROBINSON, PERSONAL (See entry of December 20.) Heretofore, the assets withdrawn from a business by the proprietor have been debited to his Capital account in recording the reduction of his interest in the business. It is better practice, however, to record current proprietary withdrawals in a separate withdrawals account. This account is usually referred to as the proprietor's personal account, or as his drawing account.

When merchandise is withdrawn by a proprietor, his drawing account should be debited at cost, and a credit made to the Purchases account.

The drawing account of a proprietor should not be debited for withdrawals of invested capital. Such drawings—representing large or permanent withdrawals of capital—should be debited to his Capital account.

(When the books are being closed at the end of the accounting period, the balance of the proprietor's drawing or personal account should be transferred to his Capital account.)[3]

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[3] In this connection the following alternative accounting method is sometimes used:

1. Drawings are debited to the proprietor's drawing account.
2. The net income of the accounting period is transferred to the proprietor's drawing account.
3. The new balance of the drawing account is then transferred to Capital account.

Although the end result is the same, this accounting method does not warrant full endorsement for these reasons:

Profits are additions to the net worth of the business of a single proprietorship. Drawings are deductions from net worth. The Capital account of a single proprietorship should show the increase of net worth by profits as well as the reduction of net worth by proprietary drawings of profits. The information in the Capital account of a single proprietorship should parallel the information contained in the statement of capital. The Capital account of a single proprietorship should show increases and decreases in capital, not their net difference. Drawings are simply reductions of net worth expressed by debits to the proprietor's drawing account.

If it were proper to debit the drawings of an accounting period against net income, it would also be proper to debit the dividends of a corporation against the net income of a corporation for an accounting period. Only the remainder would be transferred to Retained Income (or Earned Surplus). No reputable accountant would approve this corporate accounting.

Problem

The transactions of L. T. Robinson for the month of December, 1958, were as follows:

December

1 Began business with cash, $12,000.00, and merchandise, $4,000.00. Paid rent for the month of December, $300.00.
2 Bought furniture and equipment from Cox & Lloyd, Inc., for cash, $1,200.00.
3 Sold merchandise on account to C. F. Ronald, invoice #1, $2,378.00.
5 Purchased merchandise on account from James J. Logue, $5,000.00.
7 Sold merchandise for cash to J. M. Barrie, invoice #2, $181.00.
8 Purchased merchandise for cash from Exley & Son, $700.00.
9 Paid general expenses, $626.00.
10 Mailed a check to James J. Logue in payment of merchandise purchased December 5, $5,000.00.
12 Sold merchandise on account to Clark R. Morgan, invoice #3, $489.00.
13 Received a check from C. F. Ronald in payment of his account, $2,378.00.
14 Sold merchandise on account to E. V. Sanders, invoice #4, $835.00.
15 Purchased merchandise on account from James J. Logue, $2,270.00.
16 Clark R. Morgan returns merchandise (sold to him on December 12) because of its unsatisfactory quality, $100.00.
17 Purchased merchandise on account from Henry V. Dana, $3,330.00.
19 Sold merchandise on account to C. F. Ronald, invoice #5, $558.00. Sold merchandise on account to M. G. Sheldon, invoice #6, $1,311.00.
20 Mr. Robinson withdrew cash for his personal use, $200.00.
21 Received a check from Clark R. Morgan in payment of balance of his account, $389.00.
23 Received a check from E. V. Sanders in payment of sale of December 13, invoice #4, $835.00.
26 Received a check for $63.00 as commission earned on the sale of merchandise received on consignment from Baxter & Co.
27 Mailed a check to James J. Logue in part payment of account, $1,000.00.
29 Sold merchandise on account to Clark R. Morgan, invoice #7, $1,438.00.
31 Wages are paid, $500.00.

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1958					
Dec.	1	Cash	1	12,000.00	
		Merchandise Inventory	6	4,000.00	
		L. T. Robinson, Capital			16,000.00
		Began business today with above assets.			
		Rent Expense	18	300.00	
		Cash	1		300.00
		Paid rent for month of December.			
	2	Furniture and Equipment	7	1,200.00	
		Cash	1		1,200.00
		Cox & Lloyd, Inc., bill.			
	3	C. F. Ronald	3	2,378.00	
		Sales	13		2,378.00
		Sale on account, invoice #1.			
	5	Purchases	16	5,000.00	
		James J. Logue	9		5,000.00
		Purchase on account.			
	7	Cash	1	181.00	
		Sales	13		181.00
		Sale for cash, invoice #2, J. M. Barrie.			
	8	Purchases	16	700.00	
		Cash	1		700.00
		Purchase for cash, Exley & Son.			
	9	General Expense	17	626.00	
		Cash	1		626.00
		Paid general expenses.			
	10	James J. Logue	9	5,000.00	
		Cash	1		5,000.00
		Paid bill of December 5.			
	12	Clark R. Morgan	2	489.00	
		Sales	13		489.00
		Sale on account, invoice #3.			
	13	Cash	1	2,378.00	
		C. F. Ronald	3		2,378.00
		Balance of account, invoice #1.			
	14	E. V. Sanders	4	835.00	
		Sales	13		835.00
		Sale on account, invoice #4.			
	15	Purchases	16	2,270.00	
		James J. Logue	9		2,270.00
		Purchase on account.			
	16	Returned Sales and Allowances	14	100.00	
		Clark R. Morgan	2		100.00
		For merchandise returned from sale of December 12 (invoice #3) because of inferior quality.			
	17	Purchases	16	3,330.00	
		Henry V. Dana	8		3,330.00
		Purchase on account.			

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1958						
Dec.	19	C. F. Ronald	3	558.00		
		M. G. Sheldon	5	1,311.00		
		Sales	13			1,869.00
		Sales on account, invoices #5, #6.				
	20	L. T. Robinson, Personal	11	200.00		
		Cash	1			200.00
		For personal use.				
	21	Cash	1	389.00		
		Clark R. Morgan	2			389.00
		Balance of account.				
	23	Cash	1	835.00		
		E. V. Sanders	4			835.00
		In payment of invoice #4, December 13.				
	26	Cash	1	63.00		
		Commission Income	20			63.00
		Earned on Baxter & Co., consignment.				
	27	James J. Logue	9	1,000.00		
		Cash	1			1,000.00
		On account.				
	29	Clark R. Morgan	2	1,438.00		
		Sales	13			1,438.00
		Sale on account, invoice #7.				
	31	Wages Expense	19	500.00		
		Cash	1			500.00
		December payroll.				

LEDGER

CASH — 1

1958				1958			
Dec.	1	J1	12,000.00	Dec.	1	J1	300.00
	7	J1	181.00			J1	1,200.00
	13	J1	2,378.00		8	J1	700.00
	21	J2	389.00		9	J1	626.00
	23	J2	835.00		10	J1	5,000.00
	26	J2	63.00		20	J2	200.00
					27	J2	1,000.00
					31	J2	500.00

CLARK R. MORGAN — 2

1958				1958			
Dec.	12	J1	489.00	Dec.	16	J2	100.00
	29	J2	1,438.00		21	J1	389.00

C. F. RONALD — 3

1958				1958			
Dec.	3	J1	2,378.00	Dec.	13	J1	2,378.00
	19	J2	558.00				

E. V. SANDERS — 4

1958					1958				
Dec.	14		J1	835.00	Dec.	23	J2		835.00

M. G. SHELDON — 5

1958									
Dec.	19		J2	1,311.00					

MERCHANDISE INVENTORY — 6

1958									
Dec.	1		J1	4,000.00					

FURNITURE AND EQUIPMENT — 7

1958									
Dec.	2		J1	1,200.00					

HENRY V. DANA — 8

					1958				
					Dec.	17	J1		3,330.00

JAMES J. LOGUE — 9

1958					1958				
Dec.	10		J1	5,000.00	Dec.	5	J1		5,000.00
	27		J2	1,000.00		15	J1		2,270.00

L. T. ROBINSON, CAPITAL — 10

					1958				
					Dec.	1	J1		16,000.00

L. T. ROBINSON, PERSONAL — 11

1958									
Dec.	20		J2	200.00					

12

SALES — 13

					1958				
					Dec.	3	J1		2,378.00
						7	J1		181.00
						12	J1		489.00
						14	J1		835.00
						19	J2		1,869.00
						29	J2		1,438.00

RETURNED SALES AND ALLOWANCES 14

1958 Dec.	16			J1	100.00									

15

PURCHASES 16

1958 Dec.	5			J1	5,000.00									
	8			J1	700.00									
	15			J1	2,270.00									
	17			J1	3,330.00									

GENERAL EXPENSES 17

1958 Dec.	9			J1	626.00									

RENT EXPENSE 18

1958 Dec.	1			J1	300.00									

WAGES EXPENSE 19

1958 Dec.	31			J2	500.00									

COMMISSION INCOME 20

						1958 Dec.	26			J2	63.00			

The trial balance, the statement of income, and the balance sheet prepared from the ledger of the business of L. T. Robinson follow.

L. T. Robinson

TRIAL BALANCE, DECEMBER 31, 1958

Cash	$ 6,320.00	
Clark R. Morgan	1,438.00	
C. F. Ronald	558.00	
M. G. Sheldon	1,311.00	
Merchandise Inventory	4,000.00	
Furniture and Equipment	1,200.00	
Henry V. Dana		$ 3,330.00
James J. Logue		1,270.00
L. T. Robinson, Capital		16,000.00
L. T. Robinson, Personal	200.00	
Sales		7,190.00
Returned Sales and Allowances	100.00	

Purchases	11,300.00	
General Expense	626.00	
Rent Expense	300.00	
Wages Expense	500.00	
Commission Income		63.00
	$27,853.00	$27,853.00

The merchandise inventory on hand at the close of business, December 31, 1958, was valued at cost, $10,692.00.

L. T. Robinson

STATEMENT OF INCOME FOR THE MONTH OF DECEMBER, 1958

Sales		$7,190.00
Less Returned Sales and Allowances		100.00
		$7,090.00
Cost of Sales:		
Merchandise Inventory, December 1, 1958	$ 4,000.00	
Purchases	11,300.00	
	$15,300.00	
Merchandise Inventory, December 31, 1958	10,692.00	4,608.00
Gross Profit		$2,482.00
Expenses:		
General Expense	$ 626.00	
Rent Expense	300.00	
Wages Expense	500.00	1,426.00
Net Profit from Operations		$1,056.00
Other Income:		
Commission Income		63.00
Net Income		$1,119.00

L. T. Robinson

BALANCE SHEET, DECEMBER 31, 1958

Assets		*Liabilities and Capital*	
Current Assets:		Current Liabilities:	
Cash	$ 6,320.00	Accounts Payable	$ 4,600.00
Accounts Receivable	3,307.00		
Merchandise Inventory	10,692.00	Capital:	
	$20,319.00	L. T. Robinson, Capital	16,919.00
Fixed Assets:			
Furniture and Equipment	1,200.00		
	$21,519.00		$21,519.00

The value for L. T. Robinson, Capital, $16,919.00, in the balance sheet is determined in the following manner:

L. T. Robinson, Capital, December 1, 1958	$16,000.00
Add Net income for the month of December, 1958	1,119.00
	$17,119.00
Less L. T. Robinson, Personal	200.00
L. T. Robinson, Capital, December 31, 1958	$16,919.00

Classification of Accounts on the Statement of Income

The financial statements of a business should be constructed so as to emphasize information of significant interest. In this way the statements will be more than ordinarily *useful* to management, to the owners of a business, and to lenders of funds (banks, for example). With respect to the statement of income the following values, especially, are important:

1. *Sales* is the total of all sales of merchandise. The volume of sales is an important index of business success.

2. *Cost of Sales* is the cost of merchandise disposed of through the channel of sales. To the management of a business, cost of sales is an important determinant of the profitability of sales and it is an important value, also, when plans are being made for the improvement of this profitability. Cost of sales, additionally, is serviceable to management in controlling the volume of merchandise purchased by a business, i.e., as a general rule a business should purchase merchandise about equal in dollar volume to the cost of that which has been sold (allowing, of course, for warranted seasonal fluctuations). Some managements, indeed, control purchases by making them commensurate with the daily, weekly, or monthly values for cost of sales.

3. *Gross Profit* is the difference between sales and cost of sales. This value is closely watched by management because, to be successful, a business should earn an amount of gross profit large enough to cover its operating expenses and large enough, also, to yield a satisfactory amount of net profit. The earning of an adequate gross profit is a primary concern of the management of a business.

4. The *Expenses* which have been more or less directly incurred in the production of sales, i.e., operating expenses, are deducted from gross profit to yield "net profit from operations."

The expenses of a business may be shown on the statement of income under the single heading Expense. This heading, however, is not satisfactory where there are significant *classes* of expense. The classification of expenses provides management with distinctive expense information. This, in turn, leads to better control of the expenses of a business.

As a general rule, the operating expenses of a merchandising business are divided into *selling expenses* and *general expenses*. Selling expenses are those expenses directly incurred in the making of sales. Advertising, traveling expenses, and sales salaries are examples of selling expenses. General expenses are the nonselling operating expenses of a business; they are commonly represented by such accounts as insurance, postage, property taxes, rent expense, utilities expense (gas, electricity, water), and so on. General expenses, however, do not include manufacturing expenses.

Large businesses require a very detailed analysis of their expenses. Accordingly, they have many kinds and groups of expenses. Individually, by classes, and in total, these expenses are watched by management for assurance that they are reasonable in amount and worth while. The productivity of selling expenses, for example, and the control of these ex-

penses—especially those which are variable in nature—are an important concern of management.

5. *Net Profit from Operations* is the net operating profit earned on sales, a very important index of business success. It is a value which shows the profitability of the regular and major operations of a business. In the words of Professor Powelson, "a business cannot long be maintained in a healthy condition unless it is *operating* at a profit."[4] This profit, too, is a rough measure of the ability of a business to operate efficiently, of its ability to keep its costs within its available income.

6. Under *Other Income* (and *Other Expense*) are placed the miscellaneous nonoperating incomes (and expenses) of a business. The transactions representing the "other" incomes and expenses of a business are generally recurring nonmerchandise transactions. They are frequently incidental and sometimes extraneous to the major activity of merchandising. They are usually the secondary gains and losses of a business as distinguished from those which are primary.

7. *Net Income* is the net income—for an accounting period—which remains after consolidation of all gains, expenses, and losses. The amount of net income for any business is an important value because it directly measures the financial success of a business and the productivity of the capital and managerial talent employed in producing that income.

As a general rule, net income for the business of a proprietorship or a partnership is to be interpreted as net income before income taxes. Net income for a corporation is to be interpreted as net income after income taxes.

Classification of Assets and Liabilities on the Balance Sheet

In the balance sheet of L. T. Robinson, the assets were arranged so that cash appeared first. It was followed by noncash current assets arranged in the order of their expected conversion into cash. These assets were followed in turn by fixed assets.

As a general rule, the assets of a business are divided into at least two main groups:

1. Current Assets. Current assets are cash and other assets which, within the next twelve months of normal business operations (or working capital cycle, or operating cycle),[5] are expected to be (a) realized in cash, or (b) used up in the production of income.

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[4] "A business cannot long be maintained in a healthy condition unless it is *operating* at a profit; and the fact as to whether it is or not must not be obscured by the inclusion of extraneous items in the section of the profit and loss statement reserved, supposedly, for operating account."—John A. Powelson, *Introductory Accounting* (New York: Prentice-Hall, Inc., 1928), p. 500.

[5] "The ordinary operations of a business involve a circulation of capital within the current asset group. Cash is expended for materials, finished parts, operating supplies, labor, and other factory services, and such expenditures are accumulated as inventory cost. Inventory costs, upon sale of the products to which such costs attach, are converted into trade receivables and ultimately into cash again. The average

2. Fixed Assets. Broadly speaking, fixed assets are of long life, are not intended to be sold, and are tangible properties which are necessary in helping to discharge successfully the administrative, sales, and other functions of a business. Examples of fixed assets are office equipment, automobiles, buildings, land, and machinery.

Note: Some assets cannot be classified as being either "current" or "fixed" in nature. When such assets are owned by a business, they should be classified *separately*, according to their nature. In later chapters of this book, these miscellaneous assets will be classified as investments, intangible assets, and so on.

The liabilities of a business are divided into two main groups:

1. Current Liabilities. Liabilities which must be paid within one year are current liabilities.

2. Long-Term (or Fixed) Liabilities. Liabilities which are payable over longer terms of time than one year are called long-term (or fixed) liabilities. An example of a long-term liability is a mortgage payable on real estate, due for payment ten years from now.

In the construction of balance sheets it is usual to show current assets first, then fixed assets, then special groups, if any. On the other side of the balance sheet, current liabilities are shown first; they are followed by long-term liabilities. By listing current assets first (on the asset side) and current liabilities first (on the liability side), the balance sheet emphasizes the liquidity of assets and the ability of a business to meet its current obligations.

These groups of assets and liabilities are discussed in detail in Chapter 30.

Work Sheet for a Merchandising Business

Since all the accounts of a trial balance are used in the financial statements, and since each of these accounts appears in either the statement of income or the balance sheet, it is quite common for accountants to use work sheets to aid them in preparing the financial statements of a business. These work sheets are adjunct materials usually prepared on columnar accounting forms. Work sheets represent a means by which

1. A quick summary of the results of an accounting period may be prepared outside of the formal accounting records of a business; and
2. The data for the financial statements of a business are classified in functional columnar groupings.

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time intervening between the acquisition of materials or services entering this process and the final cash realization constitutes an *operating cycle*. A one-year time period is to be used as a basis for the segregation of current assets in cases where there are several operating cycles occurring within a year. However, where the period of the operating cycle is more than 12 months as in, for instance, the tobacco, distillery and lumber businesses, the longer period should be used. Where a particular business has no clearly defined operating cycle, the one-year rule should govern."—American Institute of Certified Public Accountants, *Accounting Research Bulletin No. 43* (New York: 1953), Chap. 3, pp. 20–21.

A very simple form of work sheet was introduced in Chapter 5 (page 61). This introductory work sheet applied primarily to a business of the *service* type. In the present chapter, the work sheet will apply primarily to a *merchandising* business where inventories are important in the determination of periodic net income. Two forms of a work sheet for a merchandising business are illustrated below and on page 96.

The trial balance of the ledger of a merchandising business is recorded in the first pair of columns of the work sheet. The accounts of the trial balance are then distributed to the proper columns of the work sheet as follows:

Example 1 (*below*)

In the Profit and Loss columns are placed the accounts which make up the statement of income.
In the Balance Sheet columns are placed the accounts which make up the balance sheet.

Example 2 (*page 96*)

In the Cost of Sales columns are placed the accounts which make up the cost of goods sold.
In the Profit and Loss columns are placed the accounts which make up the statement of income.
In the Balance Sheet columns are placed the accounts which make up the balance sheet.

Example 1

L. T. Robinson

WORK SHEET, DECEMBER 31, 1958

ACCOUNT	TRIAL BALANCE		PROFIT AND LOSS		BALANCE SHEET	
	Dr.	*Cr.*	*Dr.*	*Cr.*	*Dr.*	*Cr.*
Cash	6,320.00				6,320.00	
Clark R. Morgan	1,438.00				1,438.00	
C. F. Ruble	558.00				558.00	
M. G. Sheldon	1,311.00				1,311.00	
Merchandise Inventory	4,000.00		4,000.00			
Furniture and Equipment	1,200.00				1,200.00	
Henry V. Dana		3,330.00				3,330.00
James J. Logue		1,270.00				1,270.00
L. T. Robinson, Capital		16,000.00				16,000.00
L. R. Robinson, Personal	200.00				200.00	
Sales		7,190.00		7,190.00		
Rtd Sales and Allces	100.00		100.00			
Purchases	11,300.00		11,300.00			
General Expense	626.00		626.00			
Rent Expense	300.00		300.00			
Wages Expense	500.00		500.00			
Commission Income		63.00		63.00		
	27,853.00	27,853.00				
Merchandise Inventory, December 31, 1958				10,692.00	10,692.00	
Net Income to L. T. Robinson, Capital			1,119.00			1,119.00
			17,945.00	17,945.00	21,719.00	21,719.00

Example 2

L. T. Robinson

WORK SHEET, DECEMBER 31, 1958

ACCOUNT	TRIAL BALANCE		COST OF SALES		PROFIT AND LOSS		BALANCE SHEET	
	Dr.	*Cr.*	*Dr.*	*Cr.*	*Dr.*	*Cr.*	*Dr.*	*Cr.*
Cash	6,320.00						6,320.00	
Clark R. Morgan	1,438.00						1,438.00	
C. F. Ruble	558.00						558.00	
M. G. Sheldon	1,311.00						1,311.00	
Merchandise Inventory	4,000.00		4,000.00	10,692.00			10,692.00	
Furniture and Equipment	1,200.00						1,200.00	
Henry V. Dana		3,330.00						3,330.00
James J. Logue		1,270.00						1,270.00
L. T. Robinson, Capital		16,000.00						16,000.00
L. T. Robinson, Personal	200.00							
Sales		7,190.00				7,190.00		200.00
Rtd. Sales and Allowances	100.00				100.00			
Purchases	11,300.00		11,300.00					
General Expense	626.00				626.00			
Rent Expense	300.00				300.00			
Wages Expense	500.00				500.00			
Commissions Income		63.00				63.00		
	27,853.00	27,853.00						
Cost of Sales to Profit and Loss				4,608.00	4,608.00			
			15,300.00	15,300.00				
Net Income to L. T. Robinson, Capital					1,119.00			1,119.00
					7,253.00	7,253.00	21,719.00	21,719.00

The first work sheet (Example 1) is a style of work sheet which is widely used. The method of handling the value for the ending inventory should be carefully noted.

The second work sheet (Example 2) is essentially an expansion of the first work sheet. It has an additional pair of columns for cost of sales; in these columns are placed the accounting values which make up the cost-of-goods-sold section of the statement of income. Also introduced in this work sheet is an alternative method of handling the value for the ending inventory: a *debit* in the balance sheet columns and a *credit* in the cost-of-sales columns on the line on which the value for the old inventory appears. This debit and credit reflects the entry which would be made to record the new inventory when and if the books were being formally closed. In the instant example the entry would be

Merchandise Inventory	10,692.00	
Cost of Sales		10,692.00
To record new inventory, December 31, 1958.		

The construction and use of work sheets should be well understood. In both of the work sheets illustrated on pages 95 and 96, the transfer of the balance of one pair of columns to another—the transfer of the balance of the profit and loss columns to the balance sheet columns, for example—parallels the entries which would be made when and if the accounts of a business were being formally closed.

PROBLEMS

Problem 6–1. On December 31, 19__, the condensed balance sheet of the business of J. C. Martin was

Cash	$20,000.00	Accounts Payable	$ 5,000.00
Merchandise Inventory	10,000.00	J. C. Martin, Capital	25,000.00
	$30,000.00		$30,000.00

Mr. Martin's condensed transactions for the next twelve months were as follows:

1. Sold merchandise for cash, $13,000.00.
2. Purchased merchandise for cash, $7,000.00.
3. Sold merchandise on account to sundry customers, $10,000.00.
4. Purchased merchandise on account from sundry sellers, $9,000.00.
5. Collected on accounts receivable, $8,000.00.
6. Paid accounts payable, $11,000.00.
7. Paid general expenses, $6,000.00.

Required

1. Record these transactions in appropriate T accounts. Prepare a trial balance.

2. Statement of income for the year ended December 31, 19__. Inventory, December 31, 19__, $14,000.00.
3. Balance sheet, December 31, 19__.

Problem 6–2. M. H. Williams began business on December 1, 19__, with cash, $4,000.00, merchandise inventory, $6,000.00, store equipment, $2,000.00, and marketable securities, $3,000.00. His summarized transactions for the first month of business were as follows:

1. Purchased merchandise from Lane & Son on terms of 90 days' credit, $1,400.00.
2. Paid rent, $100.00.
3. Sold merchandise to W. H. Gordon on terms of 30 days' credit, $900.00.
4. Paid various advertising bills amounting to $250.00.
5. Paid wages and salaries, $100.00.
6. Sold merchandise to Wells & Co., Inc., on terms of 30 days' credit, $1,600.00.
7. Paid gas, light, telephone, and water bills amounting to $50.00. (Debit Utilities Expense.)
8. Sold merchandise to W. H. Gordon on terms of 30 days' credit, $500.00.
9. Paid advertising bills of $200.00.
10. Paid wages and salaries, $220.00.
11. Purchased merchandise from Lane & Son for cash, $400.00.
12. A dividend check, relating to the securities owned, is received, $20.00.

Required

1. Record these transactions in T accounts. Prepare a trial balance.
2. Statement of income for the month of December, 19__. Inventory, December 31, 19__, $6,100.00.
3. Balance sheet, December 31, 19__.

Problem 6–3. James E. Gayle began business on December 1, 19__, with cash, $10,000.00, merchandise inventory, $7,760.00, and fixtures, $2,240.00. His transactions for the month of December were as follows:

1. Paid rent, $100.00.
2. Sold merchandise on credit to May & Co., $2,617.00.
3. Paid advertising bill of the *Midwest Times*, $320.00.
4. Sold merchandise on credit to John A. Clark & Co., $1,878.00.
5. Paid general expenses, $250.00.
6. Bought merchandise on credit from Fenner & Platt, Inc., $2,-904.00.
7. Bought 100 shares of stock in the General Paper Company for cash, $5,010.00.
8. Sold merchandise for cash to May & Co., $424.00.

9. Bought merchandise on credit from L. E. Benton, $1,070.00.
10. Paid wages and salaries, $444.00.
11. The invoice of $424.00 to May & Co., in transaction 8, should have been $524.00. On being notified of the error, May & Co. advise that payment will be made on January 10.
12. Paid Fenner & Platt, Inc., $904.00.
13. An advertising bill of the *Midwest Times* is paid, $270.00.

Required

1. Record these transactions in T accounts. Prepare a trial balance.
2. Statement of income for the month of December, 19__. Inventory, December 31, 19__, $8,616.00.
3. Balance sheet, December 31, 19__.

Problem 6–4. John A. Edwards began business on December 1, 19__, with cash, $10,000.00, merchandise, inventory, $9,000.00, and fixtures, $3,000.00. His transactions for the first month of business were as follows:

1. Paid rent to G. E. Marshburn, $100.00.
2. Sale of merchandise on account to May & Company, $2,600.00.
3. Paid for advertising in the *Daily News*, $310.00.
4. Sale of merchandise on account to Roy & Son, $2,000.00.
5. Paid general expenses, $300.00.
6. Purchase of merchandise on account from Scott & Company, $2,900.00.
7. Bought 100 shares of stock in the American Express Company for cash, $5,000.00.
8. Sale of merchandise on account to May & Company, $400.00.
9. Purchase of merchandise on account from Brent & Son, $1,100.00.
10. Paid wages, $400.00.
11. Paid Scott & Company $900.00 as part payment of account.
12. Paid an advertising bill of the *Daily News*, $290.00.

Required

1. Enter these transactions in T accounts. Prepare a trial balance.
2. Statement of income for the month of December, 19__. Inventory, December 31, 19__, $10,000.00.
3. Balance sheet, December 31, 19__.

Problem 6–5. J. L. Butler began business on January 1, 19__. His transactions for the month were as follows:

1. Began business with cash, $15,000.00, merchandise, $12,000.00, and fixtures, $5,000.00.
2. Bought merchandise on account from Eiler & Co., $4,000.00.
3. Sale of merchandise for cash to H. C. Bennett, $3,110.00.
4. Paid the *Clarion Times* for advertising, $300.00.

5. Sale of merchandise on account to Grant & Son, $1,470.00.
6. Wages and salaries are paid, $690.00.
7. A check is cashed for H. C. Bennett, $75.00.
8. Purchased merchandise on account from Jackson & Company, $2,900.00. A down payment of $900.00 was made on this purchase.
9. Sale of merchandise on account to H. C. Bennett, $1,760.00.
10. A used light delivery truck is accepted from H. C. Bennett in part payment of account, $700.00.
11. Wages are paid, $890.00.
12. Cash is received from Grant & Son in part payment of account, $350.00.

Required

1. Enter these transactions in T accounts.
2. Record the trial balance on a work sheet. Complete the work sheet. The inventory of merchandise, January 31, 19__, is $15,200.00.
3. Statement of income for the month of January, 19__.
4. Balance sheet, January 31, 19__.

Problem 6–6. Following is the trial balance of J. C. Mayfield on December 31, 19__:

Cash	$ 6,000.00	
Clark & Company	1,222.00	
Martin & Company	680.00	
Merchandise Inventory	7,000.00	
Office Equipment	3,000.00	
Daily & Company		$ 740.00
Notes Payable		5,000.00
J. C. Mayfield, Capital		11,162.00
Sales		25,000.00
Purchases	15,000.00	
General Expense	1,900.00	
Rent Expense	1,000.00	
Utilities Expense	500.00	
Wages and Salaries	5,600.00	
	$41,902.00	$41,902.00

Required

1. Work sheet. Inventory, December 31, 19__, $10,000.00.
2. Statement of income for the calendar year 19__.
3. Balance sheet, December 31, 19__.

Problem 6–7. John A. Henderson has the following information before him at the end of the year 19__:

Accounts Payable	$ 20,000.00
Accounts Receivable	26,000.00
Building	37,000.00
Cash	24,000.00
Commissions Earned	1,200.00

Fuel Expense	200.00
General Expense	5,000.00
John A. Henderson, Capital	100,000.00
Interest Receivable	500.00
Interest Income	1,400.00
Land	8,000.00
Merchandise Inventory, January 1, 19__	20,000.00
Merchandise Inventory, December 31, 19__	22,000.00
Notes Payable	10,000.00
Notes Receivable	23,500.00
Purchases	121,000.00
Rent Expense	1,200.00
Sales	150,000.00
Wages and Salaries	16,200.00

Required

1. Record the trial balance on a work sheet. Complete the work sheet.
2. Statement of income for the year ended December 31, 19__.
3. Balance sheet, December 31, 19__.

Problem 6–8. On December 31, 1958, the following information was assembled relative to the affairs of John E. Hanes:

Cash	$ 2,000.00
John E. Blake (customer)	17,000.00
Hamel & Son (customer)	15,000.00
Bond Interest Receivable	500.00
Bond Investments, due July 1, 1959	20,000.00
Inventory, December 31, 1957	40,200.00
Inventory, December 31, 1958	53,500.00
Land (used as a parking lot)	12,000.00
Lucas Sales Company (trade creditor)	23,100.00
Roth & Roth, Inc. (trade creditor)	46,600.00
Wages and Salaries Payable	1,000.00
Social Security Taxes Payable	300.00
Mortgage Payable, due July 1, 1965	9,000.00
John E. Hanes, Capital	30,000.00
Sales	163,000.00
Purchases	126,300.00
Advertising Expense	10,400.00
General Expense	11,200.00
Insurance Expense	500.00
Rent Expense	3,000.00
Social Security Taxes	700.00
Utilities Expense	1,200.00
Wages and Salaries	14,000.00
Bond Interest Income	1,000.00

Required

1. Work sheet.
2. Statement of income for the year ended December 31, 1958.
3. Balance sheet, December 31, 1958.
4. In what respects does the balance sheet of Mr. Hanes appear strong or weak?

Problem 6–9. Frank S. Mason began business on November 1, 1958. On December 31, 1958, the accounts of his ledger were:

Cash	$ 8,060.00
Accounts Receivable	30,000.00
Merchandise Inventory	6,000.00
Prepaid Rent	400.00
Furniture and Equipment	1,000.00
Accounts Payable	9,000.00
Notes Payable	20,000.00
Interest Payable	100.00
Frank S. Mason, Capital	25,000.00
Sales	38,000.00
Returned Sales	2,000.00
Purchases	41,000.00
Returned Purchases	1,000.00
Advertising Expense	1,100.00
Sales Salaries	1,400.00
Shipping and Sales Expense	300.00
General Salaries	800.00
Miscellaneous Expense	390.00
Payroll Taxes	110.00
Rent Expense	300.00
Stationery, Printing, and Postage Expense	140.00
Interest Expense	100.00

Required

1. Trial balance, December 31, 1958, recorded on a work sheet. Complete the work sheet. Merchandise inventory, December 31, 1958, $15,140.00.

2. Statement of income for the two months ended December 31, 1958.

3. Balance sheet, December 31, 1958.

4. In what respects do the financial statements appear to be strong or weak?

Problem 6–10. The trial balance of Walter B. Davis on December 31, 19__, was as follows:

Cash	$ 4,095.00	
U. S. Treasury Bonds (due in 9 months)	12,000.00	
Accounts Receivable	12,490.00	
Inventory	6,201.00	
Delivery Equipment	2,100.00	
Office Furniture and Equipment	5,504.00	
Building	25,000.00	
Land	5,000.00	
Notes Payable		$ 5,000.00
Accounts Payable		6,276.00
Sales Tax Payable		92.00
Social Security Taxes Payable		187.00
Mortgage Payable (due in 10 years)		10,000.00
Walter B. Davis, Capital		47,750.00
Sales		60,384.00
Purchases	42,000.00	
Advertising	1,329.00	
General Expense	3,001.00	

Insurance Expense	170.00	
Miscellaneous Repairs	176.00	
Salaries	9,000.00	
Taxes (on property)	610.00	
Utilities Expense	663.00	
Warehouse Rent	600.00	
Interest Income		250.00
	$129,939.00	$129,939.00

Required

1. Work sheet. New inventory, $10,366.00.
2. Statement of income for the year ended December 31, 19__.
3. Balance sheet, December 31, 19__.

Problem 6–11. D. C. Elder began business on December 1, 19__, with merchandise, $25,000.00, cash, $15,000.00, building, $8,000.00, and land, $2,000.00. His transactions for the month of December were as follows:

December

1 Bought fixtures from the Holmes Fixture Co. for cash, $3,000.00.
3 Sale of merchandise on account to J. B. Wright, $3,400.00.
5 Purchase of merchandise on account from L. B. Ainsworth, $1,250.00.
8 Advertising bills were paid, $100.00.
10 Sale of merchandise for cash to J. B. Wright, $6,600.00.
12 Collected $200.00 rent from a tenant occupying one half of the building owned by Mr. Elder.
17 Received a check from J. B. Wright to apply on account, $2,400.00.
19 Purchase of merchandise on account from B. J. Spears, $5,000.00.
22 Sale of merchandise on account to J. B. Wright, $2,100.00.
24 Miscellaneous expenses are paid, $350.00.
27 Because the wrong kind of merchandise was shipped him, J. B. Wright returns the merchandise sold him on December 22.
29 A fixture, which is no longer needed, is sold on account to J. B. Wright at cost, $250.00.
31 J. B. Wright, being temporarily short of cash, is given a cash loan of $750.00 with the oral understanding that this loan is to be repaid in sixty days. There is no written evidence to support this transaction with the exception of the check written in Mr. Wright's favor.
Paid salaries, $660.00.

Required

1. Enter these transactions in a journal. Post to the ledger, using formal accounts.
2. Record the trial balance on a work sheet. Complete the work sheet.
3. Statement of income for the month ended December 31, 19__. Merchandise inventory, December 31, 19__, $22,060.00.
4. Balance sheet, December 31, 19__.

Chapter 7

DIVISION OF THE JOURNAL INTO BOOKS OF ORIGINAL ENTRY

Introduction

The general journal could be used to record all of the accounting transactions of a business. If this were done, all transactions would be recorded chronologically and without being classified into distinctive groups of transactions.

When the transactions of a business are numerous, it is highly advantageous to classify transactions into groups of *like* transactions and to divide the journal into several journals. Each journal will be used to record a distinctive group of *like* transactions. By dividing the journal into several journals, it is possible to record and post transactions more simply and quickly. It is possible, also, to realize certain economies attendant upon a division of bookkeeping labor, for each journal could be the particular work and responsibility of a special bookkeeping clerk.

The journals most commonly used in business today are the following:

Sales Journal	commonly known as the	Sales Book
Purchases Journal		Purchases Book
Cash Receipts Journal		Cash Receipts Book
Cash Payments Journal		Cash Payments Book
General Journal		Journal

The sales book is used to record sales of merchandise only. As a general rule this means merchandise sold "on account."

The purchases book is used to record purchases of merchandise only. As a general rule this means merchandise purchased "on account."

The cash receipts book is used to record all receipts of cash.

The cash payments book is used to record all payments of cash.

The journal is used to record only those transactions which cannot be efficiently or appropriately entered in one of the other special "books" of a business.

Entries in the general journal of a business should be made only on the authority of responsible official approvals. This is important not only in the interest of controlling entries in the journal but because, sometimes, credits to accounts receivable in the journal may represent the attempt of a dishonest employee to cover up or conceal a cash shortage.

Some businesses use the following printed form for their journal entries. After being officially approved, the entry recorded on the form is posted. The written form—usually called a journal voucher—becomes the journal proper (loose-leaf with each journal voucher being numbered consecutively).

JOURNAL VOUCHER NO._____

	Account Titles	*Debit*	*Credit*

Explanation:

Prepared by: 19__

Approved by: 19__

Posted—general ledger: 19__

Posted—subsidiary ledger: 19__

Books of Original Entry

The "journals" of a business are known as "books of original entry" because each journal is a book of *original* entry for a certain distinctive group of transactions. Postings to the ledger are made directly from each of these books of original entry.

As a general rule, an entry which has been recorded in one of these books of original entry should not also be recorded in another journal. For example, a sale on account should be recorded in the sales book *only;* a purchase of merchandise on account should be recorded in the purchases book *only;* cash received should be recorded in the cash book *only;* and disbursements of cash should be recorded in the cash payments book *only.* Cash sales and cash purchases, however, warrant some special attention (as described on page 112 and page 113).

Sometimes, transactions will be encountered which are too complex to be recorded in their entirety in only one book of original entry. A transaction of this kind should be analyzed as to its component elements and

each element made the basis of a separate entry in one of the books of original entry. (See Examples C, D, and E, pages 114–115.)

Sales Book

All sales of merchandise made on credit terms are recorded in the sales book from responsibly approved office copies of the sales invoices. The lay-out of the sales book differs from that of the general journal in order to speed up the recording of sales transactions. There is continued careful observance of the rule of double entry, however.

A typical sales book is as follows:

SALES BOOK — Page 1

DATE		INVOICE NO.	DEBIT ACCOUNT OF	L.F.	AMOUNT
1958					
Dec.	3	1	C. F. Ronald		2,378.00
	12	3	Clark R. Morgan		489.00
	14	4	E. V. Sanders		835.00
	19	5	C. F. Ronald		558.00
		6	M. G. Sheldon		1,311.00
	29	7	Clark R. Morgan		1,438.00
	31		Sales, Credit		7,009.00

Each sale on account represents

1. a debit to a customer's account, and
2. a credit to the Sales account.

This is the interpretation to be given to each entry in the sales book.

FASTER POSTING In the sales book above, 6 sales are recorded, each sale representing a debit to a customer's account and a credit to the Sales account. There are 6 debits and 6 credits but, although the 6 debits are posted separately to the 6 named accounts, the 6 credits are all posted to the same account, Sales. Why not, instead, post these credits in total and save the time and labor which would otherwise be expended in posting these credits individually? If, instead of 6 sales, there were 600 sales, why not post the 600 credits in total and save the labor of 599 postings? Thus, one of the great advantages in the use of a sales book becomes apparent: although debits must be posted individually to customers' accounts, credits are posted in total to the Sales account (at the end of the month), thus saving the time and labor which would otherwise be expended in posting these credits individually.

It will be observed that the sales book permits debit values to be posted daily. Daily postings to customers' accounts are desirable if the credit control over accounts receivable is to be effective. The posting of

credit values from the sales book, as already stated, is deferred until the end of the month, when they are posted in total.

As each value is posted, the ledger account will show a reference to S1 (as an example), meaning that the entry in the ledger account came from the sales book, page 1. In the L.F. column of the sales book should be recorded the ledger page to which each value was posted.

Purchases Book

Purchases of merchandise made on credit terms are recorded in the purchases book from responsibly approved purchases invoices. Each invoice is entered in the purchases book under the date of the creditor's bill.

The purchases book, described in this section, is limited to purchases of merchandise only. Bills for nonmerchandise items, i.e., those for services, supplies, equipment, and so on, will be recorded directly in the cash payments book when these bills are paid.

Invoices for purchases of merchandise, as well as invoices for other expenditures, should be recorded in the books of a business only after these bills have been responsibly approved. In many businesses it is quite common to require written responsible approvals for each step of the verification process, each invoice being appropriately rubber-stamped for this purpose. A vendor's invoice, with a representative rubber stamp impression placed upon it, is illustrated on page 108.

A typical purchases book is as follows:

PURCHASES BOOK — Page 1

DATE		CREDIT ACCOUNT OF	L.F.	AMOUNT
1958				
Dec.	5	James J. Logue		5,000.00
	15	James J. Logue		2,270.00
	17	Henry V. Dana		3,330.00
	31	Purchases, Debit		10,600.00

Additional columns may be incorporated in the purchases book to provide for miscellaneous information as, for example, (1) bill number, if invoices from creditors are numbered as received, and (2) terms of purchase. Special columns of this general nature are justified only by the test of genuine serviceability. Even when provided for, these columns are very often more honored in the breach than in the observance of their intended use.

Each purchase of merchandise on account represents:

1. a debit to the Purchases account, and
2. a credit to some vendor's account.

Heinz & Dole, Inc.
622 Main Street
Union City, Mass.

Invoice No. 7907

SOLD TO: Blair & Son, Inc.
300 Central Ave.
Dearborn, Mass.

SHIPPED TO: Same

DATE August 29, 1958
TERMS 1/10, n/60
F.O.B. Union City, Mass.
SHIPPED VIA Truck
PURCHASE ORDER NO. 1202

QUANTITY	DESCRIPTION	PRICE	AMOUNT
10 cases	Royal #1 Raspberry Preserves	30.00	300.00
20 cases	Royal #1 Gooseberry Preserves	35.00	700.00
			1,000.00

	DATE	INITIALS
Purchase Order No.		
Received O.K.		
☐ Storeroom		
☐ Direct to department		
Prices and Terms O.K.		
Extensions and Footings O.K.		$
Distribution:		$
Account		
Entered		
Paid by Check No.		

This is the interpretation to be given to each entry in the purchases book.

FASTER POSTING The purchases of merchandise recorded in the purchases book above represent

1. three debits to the Purchases account, and
2. three credits to the several personal accounts named.

Instead of posting the three debits individually, they are posted in total to the Purchases account at the end of the month. The posting of the purchases book, therefore, is summarized as follows:

1. The debits are posted in total to the Purchases account (at the end of the month), thus saving the time and labor which would otherwise be expended in posting these debits individually.
2. The credits are posted individually to vendors' accounts.

The purchases book permits the *credit* values for purchase transactions to be posted daily. (This is desirable if the control over accounts payable is to be effective.) The posting of debit values from the purchases book is deferred until the end of the month, when they are posted in total.

As each value is posted, the ledger account will show a reference to P1 (as an example), meaning that the entry in the ledger account came from the purchases book, page 1. In the L.F. column of the purchases book should be recorded the ledger page to which each value was posted.

Although the layout of the purchases book does not specifically designate that the Purchases account is to be debited, the fact that a transaction is entered in the purchases book implies a debit to the Purchases account just as an entry in the sales book implies a credit to the Sales account. At the end of each month these implied debits and credits are formally recognized and posted in total to the ledger.

Note: The purchases book for a given month is usually not totaled and ruled until a few days after the close of the month in question. This is done in order to permit the recording of purchases made in the closing days of a month in the purchases book of that month. Should it be necessary to record a purchase invoice of one month (November 25, for example) in the purchases book of the next month (December, for example), the date column of the purchases book for the new month (December) should show this fact, thus:

DATE		CREDIT ACCOUNT OF
1958		
Dec.	11/25	The Chandler Company

The date should be shown in a similar manner in the creditor's account.

The reason for showing the date in this way is to establish the month of original entry and to facilitate the checking of a creditor's account in case differences arise.

Cash Receipts Book

In this book of original entry are recorded all receipts of cash. The authority for making an entry in the cash receipts book may be any of the following:

1. The check itself.
2. Cash received tickets or slips. One authoritative cash ticket is prepared for each receipt of cash.
3. Cash sales tickets.
4. Cash register records.
5. Credit memoranda received from a bank.

A simple cash receipts book is as follows:

CASH RECEIPTS BOOK — Page 1

DATE		ACCOUNT CREDITED	EXPLANATION	L.F.	AMOUNT
1958					
Dec.	1	L. T. Robinson, Capital	Cash investment		12,000.00
	7	Sales	J. M. Barrie, invoice #2		181.00
	13	C. F. Ronald	Balance of account		2,378.00
	21	Clark R. Morgan	Balance of account		389.00
	23	E. V. Sanders	Invoice #4, Dec. 13		835.00
	26	Commission Income	Earned on Baxter & Co. consignment		63.00
	31	Cash, Debit			15,846.00

Each receipt of cash represents

1. a debit to the Cash account, and
2. a credit to some other account.

This is the interpretation to be given to each entry in the cash receipts book.

FASTER POSTING The cash receipts recorded in the cash receipts book above represent

1. Six debits to the Cash account, and
2. Six credits to the several accounts named in the "account credited" column.

Instead of posting the six debits individually, they are posted in total to the Cash account at the end of the month. The posting of the cash receipts book may therefore be summarized as follows:

1. The debits are posted in total to the Cash account (at the end of the month), thus saving the time and labor which would otherwise be expended in posting these debits individually.
2. The credits are posted individually to the accounts named. Credits may be posted daily, weekly, or monthly. However, most businesses find it desirable to make daily postings of credits to accounts with customers.

As each value of the cash receipts book is posted, the ledger account will show a reference to CR1 (as an example), meaning that the entry in the ledger account came from the cash receipts book, page 1. In the L.F. column of the cash receipts book should be recorded the ledger page to which each value was posted.

Cash Payments Book

In this book of original entry are recorded all payments of cash. The authority for making an entry in the cash payments book may be any of the following

1. The checks themselves or carbon copies.
2. Stubs of the checkbook.
3. The voucher (described in Chapter 21).
4. Cash payment tickets or slips. One authoritative cash ticket is prepared for each payment of cash.
5. Debit memoranda received from a bank.

A simple cash payments book is as follows:

CASH PAYMENTS BOOK — Page 1

DATE	ACCOUNT DEBITED	EXPLANATION	L.F.	AMOUNT
1958				
Dec. 1	Rent Expense	December rent		300.00
2	Furniture and Equipment	Cox & Lloyd, Inc. bill		1,200.00
8	Purchases	Exley & Son		700.00
9	General Expense			626.00
10	James J. Logue	Bill, December 5		5,000.00
20	L. T. Robinson, Personal			200.00
27	James J. Logue	On account		1,000.00
31	Wages Expense	December payroll		431.00
	Cash, Credit			9,457.00

Each payment of cash represents

1. a debit to some account other than Cash, and
2. a credit to the Cash account.

This is the interpretation to be given to each entry in the cash payments book.

FASTER POSTING The cash payments recorded in the cash payments book above represent

1. Eight debits to the several accounts named in the "account debited" column, and
2. Eight credits to the Cash account.

Instead of posting the eight credits individually, they are posted in total to the Cash account at the end of the month. The posting of the cash payments book may therefore be summarized as follows:

1. The debits are posted individually to the accounts named. These postings may be made daily, weekly, or monthly. Many businesses find it desirable to make daily postings of debits to accounts with creditors.
2. The credits are posted in total to the Cash account (at the end of the month), thus saving the time and labor which would otherwise be expended in posting these debits individually.

As each value of the cash payments book is posted, the ledger account will show a reference to CP1 (as an example), meaning that the entry in the ledger account came from the cash payments book, page 1. In the L.F. column of the cash payments book should be recorded the ledger page to which each value was posted.

COMMENT In bound books the cash receipts and cash payments are generally recorded on opposite pages, the left and right pages, respectively. In loose-leaf books, the cash receipts and cash payments transactions of a business are generally recorded on separate pages which are filed in individual cash receipts and cash payments post binders.

Journal

Transactions which cannot be entered in other books of original entry are recorded in the journal. The form of the journal, as illustrated on page 87, is not changed.

Selection of Book of Original Entry

Occasionally, a transaction may be encountered in which the selection of a book of original entry may prove to be something of a problem. The following comments may prove helpful in handling some of these transactions:

A. *Cash sales.* Cash sales can be handled most easily by entering them in the cash receipts book *only*. Ordinarily, this is the procedure which should be used. There are, however, three other methods for recording cash sales:

1. Cash sales can be handled like sales made on credit terms:
   a) Enter each cash sale in the sales book; debit the customer's account.
   b) Enter the cash received in the cash receipts book; credit the customer's account.
2. Cash sales can be handled like sales made on credit terms, but with this modification in the recording process:
   a) Enter each cash sale in the sales book; debit the Cash Sales account.
   b) Enter the cash received in the cash receipts book; credit the Cash Sales account.

   Under this method of accounting, the Cash Sales account is opened and operated like a customer's account. The method is of some advantage where cash is not handled by the bookkeeper. It provides a desirable check on cash sales; the cashier's daily report of cash received from cash sales must tally with the daily total of cash sales invoices turned over to the bookkeeper by the billing department. Obviously, at the close of each business day, there should be no balance in the Cash Sales account.

   This method can also be used advantageously in cases where it is necessary to classify sales by departments, products, or otherwise, the analysis being made in the sales book at the time of original entry of the transaction.
3. Cash sales may be entered in the cash receipts book and also in the sales book.

   When this method of recording cash sales is followed, the debit to Cash from the sales book and the credit to Sales from the cash receipts book are not posted. The reason is that the complete double entry represented by the sales book entry is duplicated by the cash sale entry in the cash receipts book. Obviously, two debits and two credits should not be posted for each cash sale transaction; one pair must be omitted. The L.F. columns in the cash receipts book, and sales book, in so far as cash sales are concerned, should be checked (✓) to indicate the purposeful omission of postings and to prevent duplication of postings.

B. *Cash purchases.* Cash purchases can be handled most easily by entering them in the cash payments book *only*. Ordinarily, this is the procedure which should be used. There are, however, three other methods for recording cash purchases:

1. Cash purchases can be handled like purchases made on credit terms:
   a) Enter each cash purchase in the purchases book; credit the seller's account.
   b) Enter the payment in the cash payments book; debit the seller's account.

2. Cash purchases can be handled like purchases made on credit terms, but with this modification in the recording process:
   a) Enter each cash purchase in the purchases book; credit the Cash Purchases account.
   b) Enter the payment in the cash payments book; debit the Cash Purchases account.

   Under this method of accounting, the Cash Purchases account is opened and operated like an account with a trade creditor. It provides a desirable check on cash purchases. Obviously, at the close of each business day, there should be no balance in the Cash Purchases account.

   This method can also be used advantageously in cases where it is necessary to classify purchases by products, departments, or otherwise, the analysis being made in the purchases book at the time of original entry of the transaction.
3. Cash purchases may be entered in the cash payments book and also in the purchases book.

   When this method of recording cash purchases is followed, the debit to Purchases from the cash payments book and the credit to Cash from the purchases book are not posted.

C. *Sale on account, including a down payment. Example:* A sale of merchandise, $1,000.00, is made by W. E. Hall to W. C. Morse on terms of 40% down,the balance payable $100.00 monthly. A transaction of this kind should be recorded in two books:

SALES BOOK:	W. C. Morse	1,000.00	
	Sales		1,000.00
	To record sale.		
CASH RECEIPTS BOOK:	Cash	400.00	
	W. C. Morse		400.00
	To record down payment.		

D. *Purchase on account, including a down payment.* Using the foregoing transaction, the accounting record on the books of W. C. Morse would be

PURCHASES BOOK:	Purchases	1,000.00	
	W. E. Hall		1,000.00
	To record purchase.		
CASH PAYMENTS BOOK:	W. E. Hall	400.00	
	Cash		400.00
	To record down payment.		

E. *Purchase of realty, payment in cash and mortgage. Example:* T. J. Brooks purchases land from S. G. Vantell for $50,000.00 on terms of $20,000.00 cash, and a mortgage of $30,000.00. The books of entry for Mr. Brooks would be

JOURNAL:	Land	50,000.00	
	S. G. Vantell		50,000.00
	To record purchase of land.		

CASH PAYMENTS BOOK:	S. G. Vantell	20,000.00	
	Cash		20,000.00
	To record down payment.		
JOURNAL:	S. G. Vantell	30,000.00	
	Mortgage Payable		30,000.00
	To record mortgage liability on land purchase.		

Summary

The division of the general journal into several journals results in several advantages:

1. The different books of original entry represent a classification of transactions.
2. The original accounting record of transactions is simplified. Every entry in the sales book, for example, implies a credit to the Sales account. Constant repetition of the word "Sales" is unnecessary. Explanations can be simplified.
3. Division of labor is made possible. One employee can enter transactions in the sales book, a second can enter transactions in the purchases book, a third can enter transactions in the cash books, and so on.
4. Because totals and not details are posted, the procedure of posting is measurably simplified with a saving in time and labor.
5. There is less opportunity for error because of
   a) simplified entries, and
   b) simplified postings.
6. The ledger is relieved of a mass of financial detail and becomes, more than ever, a *summary* of financial facts.

The most frequently employed books of original entry are sales, purchases, cash receipts, cash payments, and journal. These books are often supplemented by others, such as those for returned sales and allowances, returned purchases and allowances, notes receivable, and notes payable. Whether or not more than five books of original entry should be employed in a given case depends upon the circumstances of that case. As a general rule, a special book of original entry should be used for each type of transaction of frequent occurrence. Economies of the kind illustrated in this chapter are worth realizing whenever possible.

Illustrative Problem

The books of L. T. Robinson, reproduced below, illustrate the following:

1. The employment of five books of original entry
2. Posting the books of original entry to the ledger
3. The ledger after all transactions have been posted

This illustrative problem should be thoroughly studied in order to achieve familiarity with the bookkeeping method employed and to appreciate the superiority of the procedures illustrated.

The transactions of L. T. Robinson for the month of December, 1958, were as follows:

December

1 Began business with cash, $12,000.00, and merchandise, $4,000.00. Paid rent for the month of December, $300.00.
2 Bought furniture and equipment from Cox & Lloyd, Inc., for cash, $1,200.00.
3 Sold merchandise on account to C. F. Ronald, invoice #1, $2,378.00.
5 Purchased merchandise on account from James J. Logue, $5,000.00.
7 Sold merchandise for cash to J. M. Barrie, invoice #2, $181.00.
8 Purchased merchandise for cash from Exley & Son, $700.00.
9 Paid general expenses, $626.00.
10 Mailed a check to James J. Logue in payment of merchandise purchased December 5, $5,000.00.
12 Sold merchandise on account to Clark R. Morgan, invoice #3, $489.00.
13 Received a check from C. F. Ronald in payment of his account, $2,378.00.
14 Sold merchandise on account to E. V. Sanders, invoice #4, $835.00.
15 Purchased merchandise on account from James J. Logue, $2,270.00.
16 Clark R. Morgan returns merchandise (sold to him on December 12) because of its unsatisfactory quality, $100.00.
17 Purchased merchandise on account from Henry V. Dana, $3,330.00.
19 Sold merchandise on account to C. F. Ronald, invoice #5, $558.00. Sold merchandise on account to M. G. Sheldon, invoice #6, $1,311.00.
20 Mr. Robinson withdrew cash for his personal use, $200.00.
21 Received a check from Clark R. Morgan in payment of balance of his account, $389.00.
23 Received a check from E. V. Sanders in payment of sale of December 13, invoice #4, $835.00.
26 Received a check for $63.00 as commission earned on the sale of merchandise received on consignment from Baxter & Co.
27 Mailed a check to James J. Logue in part payment of account, $1,000.00.
29 Sold merchandise on account to Clark R. Morgan, invoice #7, $1,438.00.
31 Wages are paid, $500.00.

SALES BOOK — Page 1

DATE	INVOICE NO.	DEBIT ACCOUNT OF	L.F.	AMOUNT
1958				
Dec. 3	1	C. F. Ronald	3	2,378.00
12	3	Clark R. Morgan	2	489.00
14	4	E. V. Sanders	4	835.00
19	5	C. F. Ronald	3	558.00
	6	M. G. Sheldon	5	1,311.00
29	7	Clark R. Morgan	2	1,438.00
			13	7,009.00

PURCHASES BOOK — Page 1

DATE	CREDIT ACCOUNT OF	L.F.	AMOUNT
1958			
Dec. 5	James J. Logue	9	5,000.00
15	James J. Logue	9	2,270.00
17	Henry V. Dana	8	3,330.00
		16	10,600.00

CASH RECEIPTS BOOK — Page 1

DATE	ACCOUNT CREDITED	EXPLANATION	L.F.	AMOUNT
1958				
Dec. 1	L. T. Robinson, Capital	Cash investment	10	12,000.00
7	Sales	J. M. Barrie, invoice #2	13	181.00
13	C. F. Ronald	Balance of account	3	2,378.00
21	Clark R. Morgan	Balance of account	2	389.00
23	E. V. Sanders	Invoice #4, Dec. 13	4	835.00
26	Commission Income	Earned on Baxter & Co. consignment	20	63.00
			1	15,846.00

CASH PAYMENTS BOOK — Page 1

DATE	ACCOUNT DEBITED	EXPLANATION	L.F.	AMOUNT
1958				
Dec. 1	Rent Expense	December rent	18	300.00
2	Furniture and Equipment	Cox & Lloyd, Inc. bill	7	1,200.00
8	Purchases	Exley & Son	16	700.00
9	General Expenses		17	626.00
10	James J. Logue	Bill, December 5	9	5,000.00
20	L. T. Robinson, Personal		11	200.00
27	James J. Logue	On account	9	1,000.00
31	Wages Expense	December payroll	19	500.00
			1	9,526.00

JOURNAL — Page 1

1958						
Dec.	1	Merchandise Inventory	6	4,000.00		
		L. T. Robinson, Capital	10			4,000.00
		Began business today with an investment of:				
		$ 4,000.00 merchandise				
		12,000.00 cash (recorded in cash receipts book, page 1)				
		$16,000.00				
	16	Returned Sales and Allowances	14	100.00		
		Clark R. Morgan	2			100.00
		For merchandise returned from sale of December 12 (invoice #3) because of inferior quality.				

LEDGER

CASH — 1

1958					1958				
Dec.	31		CR1	15,846.00	Dec.	31		CP1	9,526.00

CLARK R. MORGAN — 2

1958					1958				
Dec.	9		S1	489.00	Dec.	16		J1	100.00
	29		S1	1,438.00		21		CR1	389.00

C. F. RONALD — 3

1958					1958				
Dec.	3		S1	2,378.00	Dec.	14		CR1	2,378.00
	19		S1	558.00					

E. V. SANDERS — 4

1958					1958				
Dec.	13		S1	835.00	Dec.	27		CR1	835.00

M. G. SHELDON — 5

1958									
Dec.	19		S1	1,311.00					

MERCHANDISE INVENTORY — 6

1958									
Dec.	1		J1	4,000.00					

FURNITURE AND EQUIPMENT — 7

1958									
Dec.	2		CP1	1,200.00					

HENRY V. DANA 8

					1958					
					Dec.	17		P1		3,330.00

JAMES J. LOGUE 9

1958					1958					
Dec.	10		CP1	5,000.00	Dec.	5		P1		5,000.00
	23		CP1	1,000.00		15		P1		2,270.00

L. T. ROBINSON, CAPITAL 10

					1958					
					Dec.	1		CR1		12,000.00
						1		J1		4,000.00

L. T. ROBINSON, PERSONAL 11

1958										
Dec.	20		CP1	200.00						

PROFIT AND LOSS 12

SALES 13

					1958					
					Dec.	7		CR1		181.00
						31		S1		7,009.00

RETURNED SALES AND ALLOWANCES 14

1958										
Dec.	16		J1	100.00						

COST OF SALES 15

PURCHASES 16

1958										
Dec.	8		CP1	700.00						
	31		P1	10,600.00						

GENERAL EXPENSE 17

1958										
Dec.	12		CP1	626.00						

RENT EXPENSE 18

1958												
Dec.	1			CP1	300.00							

WAGES EXPENSE 19

1958												
Dec.	31			CP1	500.00							

COMMISSION INCOME 20

						1958 Dec.	26			CR1		63.00

The trial balance, the statement of income, and the balance sheet prepared from this ledger of the business of L. T. Robinson are identical with the trial balance, statement of income, and balance sheet already shown on pages 90–91.

The Statement of Capital

On the balance sheet of a proprietorship, the amount of the Capital account represents a consolidation of the following values:

1. The capital at the beginning of the accounting period.
2. Increases of capital during the accounting period:
   a) by additional investments of capital; and
   b) by the net income earned during the period.
3. Decreases of capital during the accounting period:
   a) by withdrawals of invested capital;
   b) by the total of proprietary drawings for the period (i.e., total of proprietor's Drawing or Personal account); and
   c) by the net loss for the period.

The derivation of the value of the proprietor's capital account in the balance sheet of a business may be explained in a statement of capital. For the L. T. Robinson illustrative problem, the statement of capital supporting the balance sheet of December 31, 1958, would be:

L. T. Robinson

STATEMENT OF CAPITAL FOR THE MONTH OF DECEMBER, 1958

Capital, December 1, 1958	$16,000.00
Add Net income for the month of December 1958	1,119.00
	$17,119.00
Less Drawings for the month of December 1958	200.00
Capital, December 31, 1958	$16,919.00

The Accounting Cycle

This chapter carries to completion the initial description and exposition of fundamental bookkeeping method. It may be of advantage, therefore, to summarize, at this point, the various steps of the accounting cycle which have been described thus far. These steps are in the following order of performance:

1. Journalizing accounting transactions by recording them in the books of original entry.
2. Posting these entries to the ledger.
3. Preparing the trial balance. (*Note:* The work sheet, if used, should be prepared at this point.)
4. Preparing the statement of income.
5. Preparing the balance sheet.
6. Closing the books. This step is generally performed but once a year, at the end of the formal accounting period.

Underlying the accounting cycle is the basic principle that business records, in order to be worth while, must be maintained upon the twin fundamentals of honesty and accuracy. Trustworthiness in accounting records and statements is of paramount importance not only to managements, owners, investors, and accountants, but to all who would establish legal rights through the use of accounting information.

PROBLEMS

Problem 7–1. L. J. Denny commenced business on December 1, 19__, with cash, $20,000.00, and merchandise, $10,000.00. His condensed transactions for the month of December were as follows:

December

1 Paid rent for the month of December, $500.00.
5 Purchased merchandise on account from Rice & Redding, $6,000.00.
9 Purchased office equipment for cash from Key & Co., Inc., $3,000.00.
11 Paid advertising, $400.00.
12 Returned merchandise to Rice & Redding, $100.00.
15 Sold merchandise on account to Perry & Co., $14,000.00.
21 Sold merchandise on account to Perry & Co., $2,500.00.
31 Paid wages and salaries, $2,500.00.

Required

1. Record these transactions in the journal. Post to the ledger, using formal accounts.
2. Trial balance, December 31, 19__.
3. Statement of income for the month of December 19__. Inventory, December 31, 19__, $3,500.00.
4. Balance sheet, December 31, 19__.

Problem 7–2. The condensed transactions of Fred J. Lang for the month of December, 19__, were as follows:

December

1 Began business with cash, $5,000.00; merchandise, $3,000.00; and office fixtures and equipment, $2,000.00.
Paid rent for the month of December, $200.00.
5 Purchased merchandise on account from Fisher & Son, $3,500.00.
7 Sold merchandise on account to Wilson & Co., $3,000.00.
9 Purchased merchandise for cash from Fisher & Son, $800.00.
13 Paid personal household bills of Mr. Lang, $204.00.
16 Paid general expenses, $400.00.
17 Purchased merchandise on account from E. A. Garrett, $2,700.00.
20 Sold merchandise on account to Lee & Landis, $2,000.00.
23 Sold merchandise for cash to Wilson & Co., $200.00.
26 Received check from Wilson & Co., to apply on account, $500.00.
28 Sold merchandise on account to Lee & Landis, $304.00.
31 Paid payroll for December, $700.00.

Required

1. Enter these transactions in five books of original entry. Post to formal ledger accounts.
2. Trial balance, December 31, 19__.
3. Statement of income for the month of December 19__. Inventory, December 31, 19__, $6,300.00.
4. Balance sheet, December 31, 19__.

Problem 7–3. Following are the transactions of Arthur C. Kellogg for the month of December, 19__:

December

1 Began business with cash, $10,000.00; merchandise, $3,000.00; building, $14,000.00; and land, $3,000.00.
4 Fixtures and equipment are purchased from Lane & Gay, Inc., for cash, $1,000.00.
6 Purchased merchandise on account from L. A. Clark, $8,000.00.
7 Sold merchandise on account to Todd & Son, $2,050.00.
7 Paid wages and salaries, $80.00.
10 Purchased merchandise for cash from G. S. Evans & Co., $600.00.
12 Paid traveling expenses, $300.00.
14 Paid wages and salaries, $100.00.
16 Sold merchandise on account to J. P. White, $1,000.00.
17 A payment of $5,000.00 is made on the purchase of December 6.
19 Paid advertising, $500.00.
21 Paid wages and salaries, $120.00.
23 Sold merchandise on account to Todd & Son, $1,470.00.
24 Paid general expenses, $100.00.

25 Purchased merchandise on account from G. S. Evans & Co., $1,600.00.
26 Cash is received from J. P. White, $500.00.
28 Paid wages and salaries, $150.00.

Required

1. Record these transactions in five books of original entry. Post to the ledger.
2. Record the trial balance on a work sheet. Complete the work sheet. Merchandise inventory, December 31, 19__, $10,531.00.
3. Statement of income for the month of December, 19__.
4. Balance sheet, December 31, 19__.

Problem 7–4. The transactions of J. L. Reed for the month of December, 19__, were as follows:

December

1 J. L. Reed began business with cash, $15,000.00; merchandise, $10,000.00.
2 Paid rent for the month of December, $400.00.
3 Purchased furniture and fixtures from Beaumont Supply Company for cash, $1,596.00.
5 Purchased merchandise on credit from John T. Norton, $11,704.00.
6 Sold merchandise on account to Richard E. Patterson, $3,162.74.
10 Purchased merchandise for cash from Athens & Sherr, Inc., $931.00.
12 Sold merchandise on account to W. D. Sutton, $2,808.96.
12 Paid John T. Norton, $6,000.00.
15 Paid general expenses, $678.30.
17 Sold merchandise on account to Richard E. Patterson, $3,591.00.
19 W. D. Sutton returns $100.00 of the merchandise sold him on December 12.
19 Paid sundry expenses, $154.28.
20 Purchased merchandise for cash from Goodwin & Company, $2,394.00.
23 Cash is received from Richard E. Patterson to apply on account, $900.00.
24 J. L. Reed drew cash for personal use, $300.00.
27 During the month Mr. Reed sublet a part of his store. A check for $100.00 is received from the tenant in payment of December rent.
31 Wages for the month are paid, $1,307.23.

Required

1. Record these transactions in five books of original entry. Post to the ledger.
2. Trial balance, December 31, 19__.
3. Statement of income for the month ended December 31, 19__. Inventory, December 31, 19__, $17,720.36.
4. Balance sheet, December 31, 19__.

Problem 7–5. The transactions of Harry C. Chase for the month of December, 19__, were

December

1 Began business with cash, $13,200.00; merchandise, $2,200.00; and marketable securities, $2,600.00.
2 Paid month's rent, $300.00.
3 Purchased furniture and fixtures from the Wells Supply Company for cash, $1,320.00.
5 Sold merchandise for cash to C. R. Morgan, $199.10.
7 Purchased merchandise for cash from Lancey & Son, $770.00.
10 Sold merchandise on account to C. R. Morgan, $5,380.10.
12 Paid general expenses, $688.60.
14 Purchased merchandise on account from J. W. Smith, $7,997.00.
15 Mr. Chase withdrew cash for personal use, $200.00.
17 Received a 60-day note from C. R. Morgan to apply on account, $2,000.00.
19 Purchased merchandise on account from Lancey & Son, $3,663.00.
20 Mailed to J. W. Smith a check for $4,997.00, and a 90-day note for $3,000.00, in payment of invoice of December 14.
23 Sold merchandise on account to Massey & Co., $2,229.80.
26 Returned merchandise to Lancey & Son, $663.00.
27 Received a check from C. R. Morgan to apply on account, $1,690.05.
28 Various utility expense bills (gas, light, water, and so on) are paid, $50.60.
29 Merchandise is returned by Massey & Co., as unsatisfactory, $229.80.
30 Dividend checks are received on the securities owned, $69.30.
31 Wages for the month are paid, $354.10.

Required

1. Record these transactions in five books of original entry. Post to the ledger.

2. Trial balance, December 31, 19__.

3. Statement of income for the month of December, 19__. Inventory, December 31, 19__, $8,549.00.

4. Balance sheet, December 31, 19__.

Problem 7–6. Following are the transactions of Lee J. Daniels for the period December 20–31, 19__:

December

20 Lee J. Daniels began business with cash, $10,000.00; merchandise, $2,000.00; and delivery truck, $1,000.00. Purchased land, $1,000.00, and building, $15,000.00, from A. E. Wilson, paying cash of $2,000.00 and giving a mortgage payable of $14,000.00. Purchased merchandise on account from Dott & Wiley, $2,500.00.

21 Issued check to Esso Service, Inc., for gasoline and oil $9.00, grease and wash of delivery truck, $3.00. Sales on account: W. H. Carson, $400.00; J. T. Sears, $500.00. Cash sales, $200.00.
23 Sale of merchandise to Roberts & Co., receiving in payment therefor a 60-day note for $500.00.
26 Issued checks for janitor supplies, $11.00; miscellaneous expenses, $40.00; delivery truck repairs, $7.00. Cash sales, $410.00. Purchased merchandise on account from Bruce & Milton, Inc., $3,000.00; Dott & Wiley, $2,500.00.
27 Received checks from W. H. Carson, $400.00; J. T. Sears, $100.00. Sale on account to Roberts & Co., $1,101.00.
28 Sales on account: W. H. Carson, $300.00; J. T. Sears, $800.00.
29 Issued checks for garage bill, $10.00; business license tax, $100.00; installation of electric sign on building, $500.00. Mailed check to Dott & Wiley for $1,000.00.
31 Issued checks for office salaries, $400.00; wages, $320.00. Sale on account to Roberts & Co., $1,187.00. Cash sales, $102.00.

Required

1. Enter the above transactions in five books of original entry. Post to the ledger.
2. Record the trial balance on a work sheet. Complete the work sheet. Inventory, December 31, 19__, $6,000.00.
3. Statement of income, December 20–31, 19__.
4. Balance sheet, December 31, 19__.

Problem 7–7. Following are the transactions of J. K. Roy for the month of January, 19__:

January

2 J. K. Roy begins business with cash, $5,000.00, merchandise, $3,000.00,
3 Purchased fixtures and equipment for cash, $1,250.00.
5 Merchandise is purchased on credit from J. L. Snider, $750.00.
6 Sale of merchandise on credit to A. W. Brady, $912.00.
8 Sale of merchandise on credit to L. E. White, $1,800.00.
10 Merchandise is purchased on credit from E. V. Latt & Son, $412.00.
11 Cash is received from A. W. Brady, $700.00.
13 Sale of merchandise for cash to Greer & Company, $50.00.
15 Sale of merchandise on credit to C. A. Kenney for $1,614.00.
18 Some of the merchandise purchased from E. V. Latt & Son on January 10 proving to be inferior, a claim is made. An allowance of $42.00 in the form of a credit memorandum is received today from E. V. Latt & Son in settlement of our claim.
19 Rent for the month of January is paid, $100.00.
20 Merchandise is purchased on credit from R. S. Jones, $1,300.00.
21 Cash is received from L. E. White, $800.00.
22 A check for $370.00 is mailed to E. V. Latt & Son.

24 Sale of merchandise on credit to L. E. White, $355.00.
25 General expenses are paid, $239.00.
26 Merchandise is purchased on account from R. S. Jones, $200.00.
27 Cash is received from A. W. Brady, $212.00.
28 Merchandise is purchased for cash from Caton & Company, $186.00.
29 A check for $500.00 is mailed to R. S. Jones to apply on account.
31 Wages are paid, $400.00.

Required

1. Enter these transactions in five books of original entry. Post to the ledger.

2. Trial balance, January 31, 19__. Record the trial balance on a work sheet and complete the work sheet. Inventory, January 31, 19__, $2,115.00.

3. Statement of income for the month of January 19__.

4. Balance sheet, January 31, 19__.

Chapter 8 CONTROLLING ACCOUNTS

Introduction

As a business grows in size there is an increase in

1. the number of customers served,
2. the number of creditor relationships, and
3. the kinds and types of information needed by management for the intelligent control of the values of a business.

These conditions may require the use of hundreds, often thousands, of accounts for a single business. A separate account is required for each customer, each creditor, and each kind of accounting information.

Obviously any increase in the number of accounts employed by a business means also an increase in the size of the general ledger and the amount of bookkeeping labor required.

Under circumstances of this kind the general ledger might become too unwieldy a record for effective use. To improve its serviceability the general ledger might be subdivided into sections as, for example:

Section 1: Accounts with customers.
Section 2: Accounts with merchandise creditors.
Section 3: All accounts except those with customers and merchandise creditors.

Merely dividing a bulky general ledger into sections does not, however, overcome certain difficulties:

1. Sectionalizing a general ledger does not reduce its over-all size. With no reduction in the number of accounts included in the general ledger, the trial balance tends to be long.
2. Sectionalizing a general ledger does not reduce the length of the trial balance. A long trial balance and the preparation of financial statements are tedious procedures even when no errors occur. The longer the trial balance, the greater is the likelihood of error. The discovery of errors becomes a procedure increasingly difficult and laborious.

Delay in obtaining a trial balance of the general ledger will also delay other business operations:

1. The mailing of monthly statements to customers. In turn, this may seriously delay collections.
2. The preparation of the statement of income and the balance sheet. Much of the value of these statements is found in their timeliness, and any delay incurred in their preparation may lessen their value to management.

These difficulties—the drag of detail upon accounting procedures—are circumvented, in part at least, through the use of controlling accounts.

Accounts Receivable Controlling Account

Suppose that all customers' accounts are taken out of the general ledger and that in their place is substituted a single account called Accounts Receivable:

ACCOUNTS RECEIVABLE	
3,600.00	

Suppose also that the accounts removed from the general ledger are placed in a separate subsidiary ledger as follows:

R. D. ANDERSON	
100.00	

J. H. BAKER	
400.00	

FRANK COX	
700.00	

JOHN DOYLE	
300.00	

J. E. EATON	
600.00	

C. C. FIELDS	
200.00	

R. P. GREGG	
800.00	

ROY O. HALL	
500.00	

This, the accounts receivable ledger, is a *subsidiary* ledger in which all individual accounts with customers are maintained. It is maintained outside the general ledger. The total of the personal accounts in this ledger is equal to the balance of the Accounts Receivable account in the general ledger.

The Accounts Receivable account in the general ledger

1. shows the total amount due from *all* customers and, in this way, collectively represents the subsidiary ledger in the general ledger; and

2. "controls" the subsidiary ledger in the sense that the total of all account balances in the subsidiary ledger must equal the balance of the Accounts Receivable account.

Definition and Use of Controlling Accounts

A controlling account is a summary account, the balance of which is explained in detail in a subsidiary ledger.

Controlling accounts should be employed by a business when similar accounts are important as a group and when it is easier to keep these accounts in a controlling account in a ledger than to add them up individually.

Posting

Since the total of the balances in the accounts receivable ledger must be equal to the balance of the Accounts Receivable controlling account in the general ledger, it follows logically that, in order to maintain this equality, whenever postings are made to the subsidiary ledger, postings must also be made to the controlling account in the general ledger, and vice versa. At first glance, this would appear to involve a great deal of extra posting work but, as a matter of fact, the posting work of the general ledger bookkeeper is greatly reduced. As a general rule, instead of posting details to customers' accounts, he posts summaries of detail (i.e., column totals) to the Accounts Receivable account. For example, if 1,000 sales were debited to various individual customers' accounts during a given month by an assistant bookkeeper, only one debit posting, the sum of the 1,000 sales, would be made to the controlling account by the general ledger bookkeeper. This posting would be made at the end of the month from the sales book:

Accounts Receivable	xxx xx	
Sales		xxx xx

This entry is the *complete general ledger record* of the sales book. Only two postings are made to the general ledger. Without the device of the controlling account, 1,000 debit postings to the general ledger would have been necessary, and 1 credit to Sales.

The work of posting, when an Accounts Receivable controlling account is employed, is summarized as follows:

1. Ordinarily column totals will be posted to the Accounts Receivable controlling account by the general ledger bookkeeper. He will not post the details making up these totals.

2. The details of column totals will be posted to the individual accounts of customers by the subsidiary ledger bookkeeper.

3. If debits or credits must be posted to customers' accounts from books of original entry which do not contain special columns for accounts receivable, each value affecting a customer's account must be posted twice—once to the Accounts Receivable account in the general ledger and once to the individual customer's account in the subsidiary ledger.

The posting of the illustrative sales book below is expressed by the entry

Accounts Receivable	7,009.00	
Sales		7,009.00

When a column total is posted to two accounts, as in this illustration, the debit ledger reference may be shown at the left (and immediately below) the column total and the credit reference at the right.

SALES BOOK — Page 1

		INVOICE NO.			
1958					
Dec.	3	1	C. F. Ronald	✓	2,378.00
	9	3	Clark R. Morgan	✓	489.00
	13	4	E. V. Sanders	✓	835.00
	19	5	C. F. Ronald	✓	558.00
		6	M. G. Sheldon	✓	1,311.00
	29	7	Clark R. Morgan	✓	1,438.00
					7,009.00
					(2) (13)

Postings to *personal* accounts are commonly indicated by check marks (✓), instead of by page numbers, in the L.F. columns of the books of original entry. The reasons are that personal accounts in a subsidiary ledger are usually maintained alphabetically and that the addition of new accounts and the dropping of others make the use of page numbers impracticable for the accounts of a current customers' ledger.

The reference (i.e., folio) column of a *customer's* account may be utilized in various ways:

1. The reference column may be used to record the page of the book of original entry from which the posting was made. This is its customary usage.

2. The reference column may be used to record invoice numbers and similar information. This is the use to which the reference column is put under machine bookkeeping—the statement, account, and sales book being prepared simultaneously. Credits are referred to as "cash" or as

"c/m". Miscellaneous debit and credit values are explained by other symbols.

3. Where personal accounts are arranged alphabetically, the reference column may be used to identify the posting source, as in the paragraph above, or, less preferably, it may be left blank. When the latter practice is employed, postings to customers' accounts are usually made directly from sales invoices which, after posting, are filed alphabetically, by dates, for ready reference. (Other source materials, such as cash tickets, would be filed in a similar manner.)[1]

To sum up, every posting to a subsidiary ledger must be reflected in a posting to the related controlling account, and vice versa.

Accounts Payable

If there are many accounts with creditors, an Accounts Payable controlling account may be established in the general ledger with the detailed personal accounts kept in a subsidiary accounts payable ledger. The bookkeeping method to be followed is similar to that for accounts receivable.

Proving the Subsidiary Ledger

To prove the subsidiary ledger requires the preparation of a schedule listing all account balances in the subsidiary ledger. If the total of this schedule is equal to the balance in the related controlling account, the subsidiary ledger is said to have been proved or reconciled. Mathematically, the two have been proved to be equal.

This proof will not reveal incorrect postings such as, for example, a debit value posted to the account of Johnson & Company which should have been made to the account of Johnston & Son. Balances in both personal accounts will be incorrect but the incorrect balances will not be discovered by a mere proving or reconciliation of the subsidiary ledger with its related controlling account.

The subsidiary ledger, as a general rule, should be reconciled with its related controlling account at the end of each month. However, if it is expedient, there is no objection to making these reconciliations more frequently.

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[1] Posting directly from the sales invoice to the customer's account virtually eliminates the sales book as a needed reference medium for the subsidiary ledger. Many businesses, in consequence, have discontinued the entry of detailed sales in the sales book. Instead, they record merely a summary of the sales of each day. If there were 26 sales days in a month, there would be 26 entries in the sales book for the month (each entry representing a collective debit to Accounts Receivable and a credit to Sales). It would be possible for these 26 summary entries to represent hundreds, if not thousands, of sales invoices. At the end of each month the sales book would be footed and its totals posted to the Accounts Receivable and Sales accounts in the general ledger.

Four-Column Cash Receipts Book

In order to permit collections on customers' accounts to be credited in *total* to the Accounts Receivable account of the general ledger and in order, also, to realize certain other bookkeeping advantages, special columns should be added to the cash receipts book.

Assume, for example, that a sale of merchandise was made on account to L. A. Jones, $1,000.00. The terms of sale were 2/10, n/30 (2% 10 days, net 30 days). These terms mean that the invoice can be paid by the customer within 10 days (from the date of the invoice) *less* a cash discount of 2%; and that, if not paid within 10 days, the full amount of the invoice is due for payment within 30 days (from the date of the invoice).[2] If the sales invoice were collected within the cash discount period of 10 days, the compound entry to record the collection would be:

Cash	980.00	
Sales Discounts	20.00	
L. A. Jones		1,000.00
To record collection of invoice #____, $1,000.00 less 2%.		

In order to

1. record transactions of this kind *completely* in a *single* book of original entry, and
2. allow collections on customers' accounts to be posted in *total* to the Accounts Receivable account in the general ledger

the cash receipts book is provided with special columns in which *all* the required debit and credit values are recorded, thus:

CASH RECEIPTS BOOK

			CREDIT	DEBIT	
			Accounts Receivable	*Sales Discounts*	*Cash*
1958 Dec.	1	L. A. Jones	1,000.00	20.00	980.00

This entry in the cash receipts is equivalent to the compound entry shown above.

Frequently, however, accounts other than those of customers must be credited because of cash received. Another column is therefore needed to record the amounts of these miscellaneous credit accounts. The following example is an illustration of a four-column cash receipts book:

[2] Cash and trade discounts are discussed in detail on page 191.

CASH RECEIPTS BOOK

				CREDIT		DEBIT	
				Miscellaneous	*Accounts Receivable*	*Sales Discounts*	*Cash*
1958							
Dec.	1	L. T. Robinson, Capital	Cash investment	12,000.00			12,000.00
	7	Sales	J. M. Barries, invoice #2	181.00			181.00
	13	C. F. Ronald	Balance of account		2,378.00	23.78	2,354.22
	21	Clark R. Morgan	Balance of account		389.00	3.89	385.11
	23	E. V. Sanders	Invoice #4, Dec. 13		835.00	8.35	826.65
	26	Commission Income	Earned on Baxter & Co. consignment	63.00			63.00
				12,244.00	3,602.00	36.02	15,809.98

This cash receipts book would be posted as follows:

DEBIT (at the end of the month):
Cash, for column total 15,809.98
Sales Discounts, for column total 36.02

CREDIT: Accounts Receivable, for column total 3,602.00
Each account in the "Account Credited" column whose amount is recorded in the "Miscellaneous" column. (These postings may be made either at the end of the month or, if desired, more or less regularly throughout the month.) Total miscellaneous postings for the month would be 12,244.00

In addition each amount shown in the Accounts Receivable column would be posted to the credit of the related individual customers' accounts in the accounts receivable subsidiary ledger.

ADVANTAGES OF A FOUR-COLUMN CASH RECEIPTS BOOK These advantages may be summarized as follows:

1. Only the total of the cash column is posted to the debit of the Cash account in the general ledger.
2. Only the total of the sales discounts column is posted to the debit of the Sales Discounts account in the general ledger.
3. Only the total of the accounts receivable column is posted to the credit of the Accounts Receivable account in the general ledger.
4. Collections covering sales invoices collected within the cash discount period are *completely* recorded on one line of the cash receipts book.
5. Each collection on a customer's account requires but *one* credit to the customer's account.
6. Because of fewer entries and fewer postings to the general ledger, time, space, and costs are saved—and accuracy is increased.

Four-Column Cash Payments Book

In somewhat similar manner, special columns have their place in the cash payments book. The following example is an illustration of a four-column cash payments book:

CASH PAYMENTS BOOK

				DEBIT		CREDIT	
				Miscellaneous	*Accounts Payable*	*Purchases Discounts*	*Cash*
1958							
Dec.	1	Rent Expense	December rent	300.00			300.00
	2	Furniture and Equipment	Cox & Lloyd, Inc., bill	1,200.00			1,200.00
	8	Purchases	Exley & Son	700.00			700.00
	9	General Expense		626.00			626.00
	10	James J. Logue	Bill, December 5		5,000.00	100.00	4,900.00
	20	L. T. Robinson, Personal		200.00			200.00
	27	James J. Logue	On account		1,000.00		1,000.00
	31	Wages Expense	December payroll	500.00			500.00
				3,526.00	6,000.00	100.00	9,426.00

This cash payments book would be posted as follows:

DEBIT: Each account in the Account Debited column whose amount is recorded in the Miscellaneous column. Total miscellaneous postings for the month would be . . . 3,526.00
Accounts Payable, for column total 6,000.00

CREDIT: Purchases Discounts, for column total 100.00
Cash, for column total 9,426.00

In addition, each amount shown in the Accounts Payable column would be posted to the debit of the related creditors' accounts in the accounts payable subsidiary ledger.

ADVANTAGES OF A FOUR-COLUMN CASH PAYMENTS BOOK These advantages may be summarized as follows:

1. Only the total of the cash column is posted to the credit of the Cash account in the general ledger.
2. Only the total of the purchases discounts column is posted to the credit of the Purchases Discounts account in the general ledger.
3. Only the total of the accounts payable column is posted to the debit of the Accounts Payable account in the general ledger.
4. Disbursements covering merchandise bills paid within the cash discount period are *completely* recorded on one line of the cash payments book.
5. Each payment on a creditor's account requires but *one* debit posting to the creditor's account.
6. Because of fewer entries and fewer postings to the general ledger, time, space, and costs are saved—and accuracy is increased.

Illustrative Problem

The books of L. T. Robinson, on pages 136–140, illustrate the following:

1. The employment of five books of original entry. The cash receipts book and the cash payments book each have four columns. Two controlling account are used, one for accounts receivable and one for accounts payable.

2. The general and subsidiary ledgers after all transactions have been posted. The symbols used in the folio columns of these ledgers refer to books of original entry. The symbols and their meanings are

S = Sales book	CR = Cash receipts book	J = Journal
P = Purchases book	CP = Cash payments book	

The symbol S1 would mean the sales book, page 1; the symbol CR1, the cash receipts book, page 1; and so on.

The transactions of L. T. Robinson for the month of December, 1958 (modified to include cash discounts), were as follows:

December

1 Began business with cash, $12,000.00, and merchandise, $4,000.00.
Paid rent for the month of December, $300.00.

2 Bought furniture and equipment from Cox & Lloyd, Inc., for cash, $1,200.00.

3 Sold merchandise on account to C. F. Ronald, invoice #1, $2,378.00.

5 Purchased merchandise on account from James J. Logue, $5,000.00.

7 Sold merchandise for cash to J. M. Barrie, invoice #2, $181.00.

8 Purchased merchandise for cash from Exley & Son, $700.00.

9 Paid general expenses, $626.00.

10 Mailed a check to James J. Logue in payment of merchandise purchased December 5, $5,000.00, less 2%.

12 Sold merchandise on account to Clark R. Morgan, invoice #3, $489.00.

13 Received a check from C. F. Ronald in payment of invoice #1, $2,378.00, less 1%.

14 Sold merchandise on account to E. V. Sanders, invoice #4, $835.00.

15 Purchased merchandise on account from James J. Logue, $2,270.00.

16 Clark R. Morgan returns merchandise (sold to him on December 12) because of its unsatisfactory quality, $100.00.

17 Purchased merchandise on account from Henry V. Dana, $3,330.00.

19 Sold merchandise on account to C. F. Ronald, invoice #5, $558.00.
Sold merchandise on account to M. G. Sheldon, invoice #6, $1,311.00.

20 Mr. Robinson withdrew cash for his personal use, $200.00.

21 Received a check from Clark R. Morgan in payment of balance of his account (and invoice #3), $389.00, less 1%.

23 Received a check from E. V. Sanders in payment of sale of December 14, invoice #4, $835.00, less 1%.

26 Received a check for $63.00 as commission earned on the sale of merchandise received on consignment from Baxter & Co.

27 Mailed a check to James J. Logue in part payment of account, $1,000.00.

29 Sold merchandise on account to Clark R. Morgan, invoice #7, $1,438.00.

31 Wages are paid, $500.00.

The merchandise on hand at the close of business, December 31, 1958, was valued at cost, $10,692.00.

SALES BOOK — Page 1

		INVOICE NO.			
1958					
Dec.	3	1	C. F. Ronald	✓	2,378.00
	12	3	Clark R. Morgan	✓	489.00
	14	4	E. V. Sanders	✓	835.00
	19	5	C. F. Ronald	✓	558.00
		6	M. G. Sheldon	✓	1,311.00
	29	7	Clark R. Morgan	✓	1,438.00
					7,009.00
					(2) (9)

PURCHASES BOOK — Page 1

1958				
Dec.	5	James J. Logue	✓	5,000.00
	15	James J. Logue	✓	2,270.00
	17	Henry V. Dana	✓	3,330.00
				10,600.00
				(13) (5)

CASH RECEIPTS BOOK — Page 1

					CREDIT			DEBIT	
					Miscellaneous		*Accounts Receivable*	*Sales Discounts*	*Cash*
1958									
Dec.	1	L. T. Robinson, Capital	Cash investment	6	12,000.00				12,000.00
	7	Sales	J. M. Barrie, invoice #2	9	181.00				181.00
	13	C. F. Ronald	Invoice #1, Dec. 3			✓	2,378.00	23.78	2,354.22
	21	Clark R. Morgan	Balance of account			✓	389.00	3.89	385.11
	23	E. V. Sanders	Invoice #4, Dec. 14			✓	835.00	8.35	826.65
	26	Commission Income	Baxter & Co. consignment	19	63.00				63.00
					12,244.00		3,602.00	36.02	15,809.98
							(2)	(11)	(1)

CASH PAYMENTS BOOK

Page 1

						DEBIT			CREDIT	
						Miscellaneous		*Accounts Payable*	*Purchases Discounts*	*Cash*
1958										
Dec.	1	Rent Expense	December rent		17	300.00				300.00
	2	Furniture and Equipment	Cox & Lloyd, Inc.		4	1,200.00				1,200.00
	8	Purchases	Exley & Son		13	700.00				700.00
	9	General Expense			16	626.00				626.00
	10	James J. Logue	Bill, December 5				✓	5,000.00	100.00	4,900.00
	20	L. T. Robinson, Personal			7	200.00				200.00
	27	James J. Logue	On account				✓	1,000.00		1,000.00
	31	Wages Expense	December payroll		18	500.00				500.00
						3,526.00		6,000.00	100.00	9,426.00
								(5)	(15)	(1)

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Page 1

1958					
Dec.	1	Merchandise Inventory	3	4,000.00	
		L. T. Robinson, Capital	6		4,000.00
		Began business today with an investment of:			
		$ 4,000.00 merchandise			
		12,000.00 cash (recorded in cash receipts book, page 1)			
		$16,000.00			
	16	Returned Sales and Allowances	10	100.00	
		Clark R. Morgan	2/✓		100.00
		For merchandise returned from sale of December 12 (invoice #3) because of inferior quality.			

LEDGER

CASH

1

1958					1958				
Dec.	31		CR1	15,809.98	Dec.	31		CP1	9,426.00

ACCOUNTS RECEIVABLE

2

1958					1958				
Dec.	31		S1	7,009.00	Dec.	16		J1	100.00
						31		CR1	3,602.00

MERCHANDISE INVENTORY

3

1958									
Dec.	1		J1	4,000.00					

FURNITURE AND EQUIPMENT

4

1958									
Dec.	2		CP1	1,200.00					

ACCOUNTS PAYABLE 5

1958				1958			
Dec.	31	CP1	6,000.00	Dec.	31	P1	10,600.00

L. T. ROBINSON, CAPITAL 6

				1958			
				Dec.	1	CR1	12,000.00
						J1	4,000.00

L. T. ROBINSON, PERSONAL 7

1958							
Dec.	20	CP1	200.00				

PROFIT AND LOSS 8

SALES 9

				1958			
				Dec.	7	CR1	181.00
					31	S1	7,009.00

RETURNED SALES AND ALLOWANCES 10

1958							
Dec.	16	J1	100.00				

SALES DISCOUNTS 11

1958							
Dec.	31	CR1	36.02				

COST OF SALES 12

PURCHASES 13

1958							
Dec.	8	CP1	700.00				
	31	P1	10,600.00				

RETURNED PURCHASES AND ALLOWANCES 14

PURCHASES DISCOUNTS 15

				1958			
				Dec.	31	CP1	100.00

GENERAL EXPENSE 16

1958											
Dec.	9		CP1	626.00							

RENT EXPENSE 17

1958											
Dec.	1		CP1	300.00							

WAGES EXPENSE 18

1958											
Dec.	31		CP1	500.00							

COMMISSION INCOME 19

					1958				
					Dec.	26		CR1	63.00

ACCOUNTS RECEIVABLE LEDGER

CLARK R. MORGAN

1958					1958				
Dec.	12		S1	489.00	Dec.	16		J1	100.00
	29		S1	1,438.00		21		CR1	389.00

C. F. RONALD

1958					1958				
Dec.	3		S1	2,378.00	Dec.	13		CR1	2,378.00
	19		S1	558.00					

E. V. SANDERS

1958					1958				
Dec.	14		S1	835.00	Dec.	23		CR1	835.00

M. G. SHELDON

1958									
Dec.	19		S1	1,311.00					

ACCOUNTS PAYABLE LEDGER

HENRY V. DANA

					1958				
					Dec.	17		P1	3,330.00

JAMES J. LOGUE

1958					1958				
Dec.	10		CP1	5,000.00	Dec.	5		P1	5,000.00
	27		CP1	1,000.00		15		P1	2,270.00

The trial balance, the statement of income, the balance sheet, and the statement of capital, as prepared from these accounts are shown below.

L. T. Robinson

TRIAL BALANCE, DECEMBER 31, 1958

Cash	$ 6,383.98	
Accounts Receivable	3,307.00	
Merchandise Inventory	4,000.00	
Furniture and Fixtures	1,200.00	
Accounts Payable		$ 4,600.00
L. T. Robinson, Capital		16,000.00
L. T. Robinson, Personal	200.00	
Sales		7,190.00
Returned Sales and Allowances	100.00	
Sales Discounts	36.02	
Purchases	11,300.00	
Purchases Discounts		100.00
General Expense	626.00	
Rent Expense	300.00	
Wages Expense	500.00	
Commission Income		63.00
	$27,953.00	$27,953.00

L. T. Robinson

STATEMENT OF INCOME FOR THE MONTH OF DECEMBER, 1958

Sales			$7,190.00
Less Returned Sales and Allowances			100.00
			$7,090.00
Sales Discounts			36.02
			$7,053.98
Cost of Sales:			
Merchandise Inventory, December 1, 1958		$ 4,000.00	
Purchases	$11,300.00		
Less Purchases Discounts	100.00	11,200.00	
		$15,200.00	
Merchandise Inventory, December 31, 1958		10,692.00	4,508.00
Gross Profit			$2,545.98
Expenses:			
General Expense		$ 626.00	
Rent Expense		300.00	
Wages Expense		500.00	1,426.00
Net Profit from Operations			$1,119.98
Other Income:			
Commission Income			63.00
Net Income			$1,182.98

L. T. Robinson

BALANCE SHEET, DECEMBER 31, 1958

Assets		*Liabilities and Capital*	
Current Assets:		Current Liabilities:	
Cash	$ 6,383.98	Accounts Payable	$ 4,600.00
Accounts Receivable	3,307.00	Capital:	
Merchandise Inventory	10,692.00	L. T. Robinson, Capital	16,982.98
	$20,382.98		
Fixed Assets:			
Furniture and Equipment	1,200.00		
	$21,582.98		$21,582.98

Schedule of accounts receivable ledger, December 31, 1958:		Schedule of accounts payable ledger, December 31, 1958:	
Clark R. Morgan	$1,438.00	Henry V. Dana	$3,330.00
C. F. Ronald	558.00	James J. Logue	1,270.00
M. G. Sheldon	1,311.00	Total, as per controlling account	$4,600.00
Total, as per controlling account	$3,307.00		

L. T. Robinson

STATEMENT OF CAPITAL FOR THE MONTH OF DECEMBER, 1958

Capital, December 1, 1958	$16,000.00
Add Net income for the month of December, 1958	1,182.98
	$17,182.98
Less Drawings for the month of December, 1958	200.00
Capital, December 31, 1958	$16,982.98

Advantages of Controlling Accounts

1. The size of the general ledger is reduced. There is less probability of error in the general ledger.
   a) There are fewer general ledger accounts; one account replaces a group of accounts.
   b) There are fewer postings and these are commonly column totals checked by the rule of double entry.
2. The general ledger trial balance is shortened and more easily balanced. Time is saved.
3. The preparation of financial statements is expedited.
4. Errors are localized.
   a) If the general ledger trial balance is *in balance*, the failure of a subsidiary ledger to agree with its related controlling account normally indicates an error in the subsidiary ledger. The controlling account provides a predetermined total for the accounts of the subsidiary ledger.

b) If the general ledger trial balance is *not in balance*, and the subsidiary ledgers agree with their respective controlling accounts, error is indicated to exist in the general ledger accounts other than the controlling accounts.

5. Totals of groups of (subsidiary) accounts are quickly available. These totals are the balances of the controlling accounts related to these groups.

6. Bookkeeping work can be divided, responsibility fixed, and controls secured over the work done by assistant bookkeepers operating the subsidiary ledgers.

Opening a Controlling Account

If a new set of books is being opened, controlling accounts may be employed from the start. For each controlling account incorporated in the new accounting system there should be a supporting subsidiary ledger.

Controlling accounts, however, may be desired for an accounting system which has not previously incorporated such controls. Suppose, for example, that an Accounts Receivable controlling account is desired; the following steps would then be taken:

1. Remove all customers' accounts from the general ledger.
2. In place of these accounts, substitute one controlling account called Accounts Receivable, thus:

ACCOUNTS RECEIVABLE

19—											
Oct.	1	Balance		J37	3,600.00						

3. A memorandum of this substitution should be recorded in the journal as follows:

Oct. 1 Customers' accounts were today transferred to a subsidiary ledger. On the general ledger these personal accounts were replaced by one account, Accounts Receivable. The personal accounts transferred were

R. D. Anderson . . .	$ 100.00	J. E. Eaton	600.00
J. H. Baker	400.00	C. C. Fields	200.00
Frank Cox	700.00	R. P. Gregg	800.00
John Doyle	300.00	Roy O. Hall	500.00
			$3,600.00

Note: If the number of accounts is large, a typewritten list may be prepared in lieu of a written listing in the journal. The typewritten list should be permanently filed to support the memorandum in the journal.

Reference to the journal should be made in the newly established Accounts Receivable controlling account. No formal postings are necessary because the record in the journal is an explanation and not a formal double

entry. The purpose of the memorandum in the journal is to have a permanent record of the transfer in a book of original entry.

Controlling Accounts: Their Further Application

The most common examples of controlling accounts are those which represent accounts receivable and accounts payable. There are, however, many other controlling accounts, among which may be mentioned the following:

1. Branch Accounts. The Royal Tire and Rubber Company maintains its head office in Akron, Ohio. Branches are located throughout the United States. On the books of the home office one account is carried with each branch; these accounts are debited, as appropriate, with the cash, merchandise, fixtures, equipment, and so on, advanced to the branches by the home office. The balance of each branch account represents the net assets of, and the home office investment in, the branch. The balance of each branch account, in turn, is explained in detail by the accounts of the branch.

2. Capital Stock. On December 31 of a recent year, The National Cash Register Company was owned by 14,786 persons. It would be obviously impractical for The National Cash Register Company to open a capital account with each shareholder on its general ledger. Instead, a controlling account was employed:

Capital Stock, 2,166,787 shares	$53,186,410.00

This account was supported in detail by a subsidiary stockholders' ledger. This ledger carried 14,786 accounts—one capital account with each stockholder; and a collective total of $53,186,410.00.

3. Notes Receivable. When note transactions are frequent, it is advisable to open a Notes Receivable controlling account in the general ledger and to keep the explanatory detail in a subsidiary ledger. This subsidiary ledger, commonly called a notes receivable register, is illustrated in Chapter 11.

In similar fashion, a controlling account and subsidiary note register may be kept for notes payable.

4. Depositors. Banks have a great many accounts with their depositors. In order to control effectively and manage this mass of information, a Depositors account is carried in the general ledger of the bank. This control account is supported by a subsidiary ledger in which accounts with depositors are carried in detail.

5. Selling Expenses. All selling expenses would be debited to the Selling Expense controlling account in the general ledger. The detailed, classified expenses would be carried in a subsidiary selling expense ledger.

6. General Expenses. All general expenses would be debited to the General Expense controlling account in the general ledger. The detailed, classified expenses would be carried in a subsidiary general expense ledger.

7. Factory Ledger. This account would be found in a manufacturing business. All details of factory accounting would be kept in a subsidiary ledger. This ledger would be represented on the general ledger by a controlling account called Factory Ledger.

The subsidiary factory ledger, in turn, might carry controlling accounts of its own. The following accounts are representative:

Raw Materials	Finished Goods	Machinery
Work in Process	Manufacturing Expenses	Factory Equipment

Each of these accounts would be supported by a subsidiary record containing the details of each of the balances of their related controlling accounts.

Subdivision of Controlling Accounts for Accounts Receivable

If accounts with customers are numerous, several controlling accounts can be established as, for example:

Accounts Receivable—A to E
Accounts Receivable—F to L
Accounts Receivable—M to R
Accounts Receivable—S to Z

Each controlling account represents a separate, subsidiary ledger. The use of several controlling accounts makes it possible to reconcile each group of customers' accounts independently. This is a consideration of much importance to businesses with many customers' accounts.

When controlling accounts are subdivided in this manner, this fact must be recognized in the appropriate books of original entry. The sales book below is one example

SALES BOOK

DATE	INVOICE NO.	DEBIT ACCOUNT OF	L.F.	DEBIT ACCOUNTS RECEIVABLE				CREDIT SALES
				A–E	*F–L*	*M–R*	*S–Z*	

Properly Designed Records Are Important

In order for financial information to be readily available for purposes of management, it is important that the accounting records of a business be designed in such a way as to expedite the recording of transactions, the preparation of financial statements, and the use of these statements by management. In order to maximize their usefulness, the books of original entry for a business should incorporate certain principles:

1. The books of original entry should be functional. These books should separate accounting transactions into basic classifications such as sales, purchases, cash receipts, and disbursements.
2. The books should permit transactions to be recorded simply and speedily, with sufficient personnel allotted to permit the prompt execution of work.
3. In order to reduce the number of individual postings, special columns should be used in books of original entry whenever similar debits or credits occur with such frequency as to allow savings to be realized by the posting of column totals instead of details.
4. When columns are posted in total, column headings should correspond with the names of the accounts in the ledger to which the totals are to be posted.
5. When it is worth while to maintain controlling accounts, column totals should be used as the basis for postings to control accounts.
6. Personal responsibility should be fixed for the proper maintenance of each of the books of original entry, and personal responsibility, also, for the original documents supporting each of the transactions recorded in these books. Responsibility for errors can then be readily traced and established, steps then being taken to minimize the occurrence of similar errors in the future. All personal responsibilities should involve the complementary check of one or more other employees as part of a system of internal check and control.[3]
7. When it is feasible to do so, it is desirable for books of original

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[3] "An effective system of internal control may be defined as one wherein the accounting work of one employee is complemented and verified by the work of another employee—both employees working independently and without duplication of each other's work."—Arnold W. Johnson, *Principles of Auditing* (New York: Rinehart & Company, Inc., 1955), p. 48.

"Internal control comprises the plan of organization and all of the coordinate methods and measures adopted within a business to safeguard its assets, check the accuracy and reliability of its accounting data, promote operational efficiency, and encourage adherence to prescribed managerial policies."—American Institute of Certified Public Accountants, *Internal Control*, a Special Report by the Committee on Auditing Procedure (New York: 1949), p. 6.

"Internal check—a system under which the accounting methods and details of an establishment are so laid out that the accounts and procedures are not under the absolute and independent control of any one person—that, on the contrary, the work of one employee is complementary to that of another—and that a continuous audit of the business is made by employees."—Special Committee on Terminology, American Institute of Certified Public Accountants (New York: 1949).

entry to be set up so that the transcription of transactions from original documents is minimized or even eliminated. For example, office copies of the sales invoices of a business may be placed in a loose-leaf binder, the binder itself serving either as the sales journal or as the detail for daily, *summary*, entries in the sales book. Monthly totals would be posted to the ledger as usual. Similarly, the purchase invoices of a business may be placed in another loose-leaf binder, the binder again serving as either the purchases journal or as the detail for daily, *summary*, entries in the purchases book. Monthly totals would be posted to the ledger as usual.

Some businesses, with the use of carbon papers and specially designed accounting forms, find it possible to handle all bills from creditors by preparing the check, the check record, and the ledger account, simultaneously. This can be done by hand or by the use of bookkeeping machines.

ANOTHER ILLUSTRATION In order to simplify bookkeeping procedures for accounts receivable and in order to reduce their bookkeeping costs, an increasing number of businesses are using a filed copy of each sales invoice—or a ledger card which is a facsimile of the sales invoice—to replace traditional posting procedures. Unpaid invoice copies, filed alphabetically by the names of customers, make up the accounts receivable subsidiary ledger. Each invoice or card in the ledger carries a tab showing the month in which the invoice was issued—January invoices or cards have a January tab, February invoices have a February tab, and so on. As sales invoices are paid, the invoice is withdrawn from the accounts receivable subsidiary ledger, marked *PAID*, and filed in a "dead" or "paid" file, maintained alphabetically. Noncash credits to accounts receivable are handled by somewhat similar methods.

The advantages claimed for such procedures are these:

1. Postings are eliminated and bookkeeping costs reduced.
2. The debit in a customer's account must be correct if the original invoice is correct. Errors of omission or transposition are impossible.
3. The history of each account is detailed. It is complete from the date of each charge to its date of payment.
4. The control over all accounts receivable is positive and secure.
5. Credit and collection procedures are expedited because past due accounts receivable are spotted instantly.
6. Accounts receivable accounts can be aged—i.e., classified as to length of time outstanding—about as fast as account balances can be written down.
7. Customers' statements can be prepared quickly.

The Private Ledger

Occasionally a business may desire to keep certain information confidential as, for instance,

Investment
Loans
Management salaries
Profits

This information can be kept confidential by placing key values in a private ledger. This ledger will be represented in the general ledger by an account called Private Ledger. Conversely, the nonconfidential information of the general ledger will be represented in the private ledger by an account called General Ledger. Together, the two ledgers comprise the general ledger.

Because it is used infrequently in business and because it is not very important in the study of elementary accounting, the private ledger will not be further discussed in this chapter or book.

PROBLEMS

Problem 8–1. J. C. Wells began business on January 2, 19__, with cash, $20,000.00; inventory, $10,000.00; and sundry fixtures and equipment, $5,000.00. His condensed transactions for the year 19__ were as follows:

Sales on account:

Lynn & Co.	$1,000.00
Corbin & Son	5,000.00
E. M. Dunn	3,000.00
Lynn & Co.	4,000.00
J. H. Todd	4,000.00
M. C. Dale	5,000.00
Corbin & Son	8,000.00

Cash received:

Lynn & Co., $1,000.00, less 1%.
E. M. Dunn, $3,000.00, less 2%.
Corbin & Son, $2,000.00, net.

Miscellaneous:

A note receivable was received from Corbin & Son, $3,000.00.

Purchases on account:

J. R. Dean	$1,000.00
Rice & Co.	5,000.00
J. R. Dean	3,000.00
Neal & Son	3,000.00
J. R. Dean	4,000.00

Cash payments:

J. R. Dean, $1,000.00, less 1%.
Neal & Son, $3,000.00, less 5%.
J. R. Dean, $1,000.00, net.
General expenses, $10,000.00.
Freight in, $1,000.00
Freight bill, to be charged to Rice & Co., $100.00.
Freight bill, to be charged to J. H. Todd, $50.00.

Required

1. Enter these transactions in five books of original entry. The sales and purchases books should be 1-column books, as styled on pages 106–107. The cash books should be 4-column books, as styled on pages 133–134. Controlling accounts should be used for accounts receivable and accounts payable.

2. Post to the general and subsidiary ledgers, using T accounts to represent formal accounts. Take a trial balance.

3. Statement of income for the year 19__. Inventory, December 31, 19__, $12,000.00.

4. Balance sheet, December 31, 19__. The balance sheet should be supported with schedules showing reconciliation of subsidiary ledgers with the balances of their related control accounts.

Problem 8–2. E. W. Reynolds began business on December 1, 19__, with cash, $5,000.00; merchandise, $7,000.00; fixtures and equipment, $3,000.00; building, $18,000.00; and land, $2,000.00. His condensed transactions for December were as follows:

Sales on account (terms 1/10, n/30)

Dec.		
3	L. E. Adams	$ 400.00
4	E. M. Clark	1,100.00
5	Dott & Son	500.00
7	Baker & Co.	800.00
10	E. M. Clark	900.00
12	Eaton & Co.	1,700.00
14	L. E. Adams	600.00
15	Dott & Son	1,300.00
18	Baker & Co.	700.00
21	Eaton & Co.	300.00
27	Dott & Son	700.00
29	Eaton & Co.	1,000.00
		$10,000.00

Purchases on account (terms 2/10, n/60)

Dec.		
5	L. B. Sherman	$ 300.00
6	Riley & Son	100.00
10	Lewis & Co.	300.00
11	J. M. Terry & Co.	900.00
17	L. B. Sherman	700.00
18	Riley & Son	1,100.00
20	Lewis & Co.	700.00
21	L. B. Sherman	400.00
30	J. M. Terry & Co.	1,800.00
		$6,300.00

Cash received from customers

Dec.

13 L. E. Adams, invoice Dec. 3, $400.00, less 1%.
20 E. M. Clark, invoice Dec. 10, $900.00, less 1%.
21 Eaton & Co., invoice Dec. 12, $1,700.00, less 1%.
29 Dott & Son, invoice Dec. 27, $700.00, less 1%.
31 Eaton & Co., invoice Dec. 29, $1,000.00, less 1%.

Cash payments

16 Riley & Son, bill of December 6, $100.00, less 2%.
20 Lewis & Co., balance of account, $200.00, less 2%.
21 J. M. Terry & Co., bill of December 11, $900.00, less 2%.
28 L. B. Sherman, bill of December 21, $400.00, less 2%.
29 Freight prepaid on merchandise shipped to Eaton & Co., this freight to be charged to customer's account, $50.00.
31 General expenses, $3,735.00.

Miscellaneous

15 Merchandise returned to Lewis & Co., $100.00.
23 Merchandise returned by Eaton & Co., $50.00.

Required

1. Enter these transactions in five books of original entry. The cash books should be 4-column books. Controlling accounts should be used for accounts receivable and accounts payable.

2. Post to the general and subsidiary ledgers. Take a trial balance.

3. Statement of income for the month of December, 19__. Inventory, December 31, 19__, $8,000.00.

4. Balance sheet, December 31, 19__. The balance sheet should be supported by schedules showing the agreement of the subsidiary ledgers with the balances of their related control accounts.

Problem 8–3. A. C. Wells began business on December 1, 19__. His books for the month of December were as follows:

SALES BOOK

Dec.	2	Allen & Co.	700.00
	5	N. A. Ford	2,800.00
	11	Hales & Kane	800.00
	17	S. T. Jackson	1,600.00
		Allen & Co.	300.00
	23	N. A. Ford	1,301.00
	30	S. T. Jackson	1,010.00
	31	Hales & Kane	90.00
		S. T. Jackson	1,400.00
			10,001.00

PURCHASES BOOK

Dec.	6	L. E. Adams	1,500.00
	10	R. C. Kinsey	1,200.00
	17	K. O. Ellison	1,700.00
	22	I. J. Goode & Son	2,200.00
	28	R. C. Kinsey	800.00
		K. O. Ellison	200.00
			7,600.00

CASH RECEIPTS BOOK

				CREDIT		DEBIT	
				Miscellaneous	*Accounts Receivable*	*Sales Discounts*	*Cash*
Dec.	1	A. C. Wells, Capital	Investment	3,000.00			3,000.00
	10	Allen & Co.	Invoice 12/2		700.00	14.00	686.00
	15	N. A. Ford	Invoice 12/5		2,800.00	46.00	2,754.00
	19	Hales & Kane	Invoice 12/11		800.00	16.00	784.00
	23	Commission Income	Dale & Co., lease	150.00			150.00
	26	S. T. Jackson	Invoice 12/17		1,600.00	32.00	1,568.00
	31	Sales	Invoice #10	5,000.00			5,000.00
				8,150.00	5,900.00	108.00	13,942.00

CASH PAYMENTS BOOK

				DEBIT		CREDIT	
				Miscellaneous	*Accounts Payable*	*Purchases Discounts*	*Cash*
Dec.	16	L. E. Adams	Bill 12/6		1,500.00	45.00	1,455.00
	20	R. C. Kinsey	Bill 12/10		1,200.00	36.00	1,164.00
	26	Utilities Expense		60.00			60.00
	27	K. O. Ellison	Bill 12/17		1,700.00	51.00	1,649.00
	29	I. J. Goode & Son	On account		1,000.00	30.00	970.00
	31	Wages Expense	December payroll	1,100.00			1,100.00
		Delivery Expense	Merchants' Delivery, Inc.	250.00			250.00
		Purchases	Dey-Lane Co.	2,000.00			2,000.00
				3,410.00	5,400.00	162.00	8,648.00

JOURNAL

Dec.	1	Merchandise Inventory		8,100.00	
		Furniture and Equipment		2,200.00	
		A. C. Wells, Capital			10,300.00
		To record noncash investment.			
	19	Returned Sales and Allowances		160.00	
		Accounts Receivable (Allen & Co.)			160.00
		Unsatisfactory merchandise returned.			
	25	Accounts Payable (I. J. Goode & Son)		110.00	
		Returned Purchases and Allowances			110.00
		Allowance for damaged goods.			
	26	Sales Discounts		10.00	
		Accounts Receivable (N. A. Ford)			10.00
		Additional cash discount on collection of December 15. Total discount, 2%.			
	29	Freight In		81.00	
		Accounts Payable (I. J. Goode & Son)			81.00
		For prepaid freight, December 22.			

Required

1. Post to the general ledger and the two subsidiary ledgers. Prepare a trial balance, December 31, 19__.

2. Statement of income for the month of December 19__. Inventory, December 31, 19__, $4,992.00.

3. Balance sheet, December 31, 19__. Include supporting schedules for accounts receivable and accounts payable.

Problem 8–4. Clark E. Campbell began business on June 1, 19__, with the following assets:

Cash	$ 5,000.00
Merchandise Inventory	6,289.00
Furniture, Fixtures, and Equipment	2,929.00
Delivery Equipment	1,782.00
	$16,000.00

Transactions for the month of June were as follows:

June

1 Purchase from J. R. Cresswell, $672.00.
Sale to T. A. Clark, $135.00.

3 Purchase from Emerson & Son, $1,008.00.

4 Cash sale to W. P. Knox, $268.00.
Purchase from J. L. Haney, $127.00.
Sale to Grant & Grant, $403.00.

5 Cash is received from T. A. Clark in payment of invoice June 1, $135.00, less 2%.

6 Purchase from Ward & Company, $237.50.
Sale to Jones & Company, $268.00.

7 Sale to Mead & McKay, $537.00.
Paid J. R. Cresswell for bill of June 1, $672.00, less 5%.
8 Cash is received from Jones & Company in payment of invoice June 6, $268.00, less 2%.
Purchase from Emerson & Son, $269.00.
10 Sale to Payne & Company, $410.00.
Purchase from J. E. Winter, $415.00.
11 Cash is paid to Emerson & Son for bill of June 8, $269.00.
Purchase from Price & Powell, $169.00.
12 Sales to Sharp & Company, $278.00, and to H. C. Riggs, $672.40.
Purchase from J. L. Haney, $484.00.
17 Paid J. L. Haney for bills of June 4 and 12, $611.00, less 5%.
19 We failed to deduct the discount on our remittance to Emerson & Son on June 11. Following our claim for credit, a check for 5% discount on $269.00 is today received from Emerson & Son in settlement.
Cash purchase from Frank Haines, $162.00.
Sale to Mead & McKay, $128.00.
20 Purchase from J. E. Winter, $139.00, and from Ward & Company, $497.00.
Cash is received from Grant & Grant for invoice of June 4, $403.00, less 1%.
21 Purchase from Emerson & Son, $927.30.
Sale to T. A. Clark, $274.10.
Cash is received from H. C. Riggs for invoice of June 12, $672.40, less 2%.
24 A credit memorandum for $7.10 is received from Emerson & Son for error in their bill of June 21.
25 Sale to Jones & Company, $954.20.
Freight of $18.10 is prepaid for the account of Jones & Company.
26 Cash is paid to Emerson & Son, $1,008.00, less 3%, for bill of June 3.
27 Purchase from J. R. Cresswell, $338.00.
Sale to Sharp & Company, $272.00.
Cash is paid to J. E. Winter for bill of June 10, $415.00, less 5%.
28 Purchase from Price & Powell, $672.25.
Sale to Grant & Grant, $1,055.10.
Cash is received from Sharp & Company for invoice of June 12, $278.00, less 2%.
29 Paid general expenses, $531.10; sales expenses, $554.00.
Sales to Jones & Company, $537.00, and to J. C. Trenton, $1,152.00.
A credit of $18.00 is passed to the account of Sharp & Company for merchandise damaged because of faulty packing in shipment of June 27.

Required

1. Enter the above transactions in the appropriate columnar books of original entry. Unless otherwise stated, all purchases and sales are on

account. Two controlling accounts are to be employed, one for accounts receivable and one for accounts payable.

2. Post to appropriate T accounts and take a trial balance.

3. Statement of income for the month of June. Merchandise inventory, June 30, 19__, $7,084.68.

4. Balance sheet, June 30, 19__. Prepare schedules showing agreement of subsidiary ledgers with balances of controlling accounts.

Problem 8–5. Following is the trial balance of the Belmont Trading Company on December 31, 19__:

Cash	$ 25,000.00	
Marketable Securities	10,000.00	
Accounts Receivable	11,000.00	
Merchandise Inventory	9,000.00	
Fixtures and Miscellaneous Equipment	12,000.00	
Accounts Payable		$ 8,000.00
Notes Payable		10,000.00
Charles A. Belmont, Capital		50,000.00
Charles A. Belmont, Personal	6,000.00	
Sales		84,302.00
Returned Sales	3,000.00	
Purchases	62,000.00	
Returned Purchases		5,000.00
Advertising Expense	1,400.00	
Delivery Expense	1,100.00	
Miscellaneous General Expense	1,900.00	
Miscellaneous Sales Expense	1,600.00	
Rent Expense	1,800.00	
Salaries and Wages, General	4,600.00	
Sales Salaries	5,680.00	
Payroll Taxes	502.00	
Supplies Expense	300.00	
Traveling Expense	600.00	
Utilities Expense	520.00	
Dividend Income		400.00
Interest Income		300.00
	$158,002.00	$158,002.00

Required

1. Work sheet. Inventory, December 31, 19__, $10,101.00.
2. Statement of income for the year ended December 31, 19__.
3. Balance sheet, December 31, 19__.

Problem 8–6. The following accounts represent the ledger of E. A. Stuart on December 31, 19__:

Accounts Payable	$12,059.00
Accounts Receivable	12,000.00
Advertising Expense	1,627.00
Building	15,000.00
Cash	7,063.00
Delivery Equipment	3,650.00
General Expense	861.00

Insurance Expense	201.00
Inventory	7,804.00
Land	3,000.00
Mortgage Payable (due 10 years from now)	7,000.00
Notes Payable	5,000.00
Notes Receivable	5,200.00
Office Equipment	3,000.00
Payroll Taxes	460.00
Property Taxes	760.00
Purchases	54,702.00
Returned Purchases and Allowances	1,001.00
Returned Sales and Allowances	4,307.00
Sales	80,822.00
E. A. Stuart, Capital	50,000.00
E. A. Stuart, Personal	6,000.00
Traveling Expense	312.00
U. S. Treasury Bonds	20,000.00
Utilities Expense	719.00
Wages and Salaries	9,216.00

Required

1. Record the trial balance on a work sheet. Complete the work sheet. Inventory, December 31, 19__, $8,211.00.
2. Statement of income for the year ended December 31, 19__.
3. Balance sheet, December 31, 19__. It is expected that the U. S. Treasury bonds will be converted into cash within the next 6 months.
4. Statement of capital for the year ended December 31, 19__.

Chapter 9

MULTIPLE-COLUMN BOOKS OF ORIGINAL ENTRY / DEPARTMENTAL ACCOUNTS AND FINANCIAL STATEMENTS

Introduction

The advantages, under certain circumstances, of using a four-column cash receipts book and a four-column cash payments book were described in Chapter 8. In order to realize important additional accounting advantages, it is often desirable for the books of original entry to be expanded so as to contain two, three, four, five, or even more money columns. Because of the many columns which they sometimes employ, these "multiple-column" books of original entry may appear to be rather complex. In reality, however, these books are quite simple in their basic structure. The extra columns in these books of original entry are intended to speed up the placement of debits and credits in the accounts of the ledger, they aid greatly in the rapid recording and classification of transactions, they specify more clearly what accounts are to be debited or credited; and they expedite the posting process.

As a general rule, the extra or special columns in books of original entry are intended

1. to permit certain transactions to be recorded completely on one line of one book of original entry,
2. to permit the posting of column totals rather than the details of these totals, and
3. to expedite the proper classification of accounting transactions.

This chapter will discuss and illustrate the use of special columns in the books of original entry, and the production and use of departmental financial statements based on multiple-column books of original entry.

Cash Receipts Book

The cash receipts books illustrated on pages 133 and 136 each contained four columns. By using additional money columns, the principle of

"posting column totals" may be extended advantageously so as to apply to various accounts which must be frequently debited or credited. The manner by which the cash receipts book can be expanded is illustrated by the seven-column cash receipts book on page 159 and the six-column cash receipts book on page 171.

Cash Payments Book

Additional money columns may also often be used advantageously in the cash payments book to handle various accounts which must be frequently debited or credited.

In the following four-column cash payments book, three common disbursements have been recorded:

CASH PAYMENTS BOOK

				DEBIT		CREDIT	
				Miscellaneous	*Accounts Payable*	*Purchases Discounts*	*Cash*
May	1	Advertising Expense	Day Sales Co.	500.00			500.00
	10	A. E. Ames & Co.	April account		1,120.00	22.40	1,097.60
	31	Wages Expense	May payroll	5,000.00			
		Withholding Income Taxes Payable		(900.00)			
		Withholding Social Security Taxes Payable		(100.00)			4,000.00

At the end of the month, the total of the cash column would be posted to the credit of the Cash account in the ledger, and the total of the purchases discounts column would be posted to the credit of the Purchases Discount account. The total of the accounts payable column would be posted to the debit side of the Accounts Payable account. The individual amounts in the Miscellaneous column would be debited to the individual accounts named, except for the values in parentheses; these are *credits*.

These three illustrative disbursements could be handled much more easily in the following six-column cash payments book:

CASH PAYMENTS BOOK

				DEBIT		CREDIT			
				Miscellaneous	*Accounts Payable*	*Withholding Income Taxes Payable*	*Withholding S.S. Taxes Payable*	*Purchases Discounts*	*Cash*
May	1	Advertising Expense		500.00					500.00
	10	A. E. Ames & Co.			1,120.00			22.40	1,097.60
	31	Wages Expense		5,000.00		900.00	100.00		4,000.00

At the end of the month, the total of each money column (except Miscellaneous) would be posted to the account heading up that column. The accounts in the "Miscellaneous" column would be posted in detail.

CASH PAYMENTS BOOK

				L.F.	DEBIT					CREDIT			
					Miscellaneous	L.F.	*Accounts Payable*	*Wages & Salaries*	*Freight In*	*Withholding Income Taxes Payable*	*Withholding S.S. Taxes Payable*	*Purchases Discounts*	*Cash*
1958													
Dec.	1	Freight In	Baltimore & Ohio						21.40				21.40
	4	Office Expense	Royal Supply Co.	42	22.10								22.10
	7	Freight In	Baltimore & Ohio						31.00				31.00
	8	Wages & Salaries	Week ending Dec. 7					425.00		63.75	8.50		352.75
	9	Emory A. Adams	November a/c			✓	412.16					8.24	403.92
		Briggs & Briggs	" "			✓	115.10					2.30	112.80
		Marley & Son	" "			✓	510.72					25.54	485.18
		M. J. Rorty & Co.	" "			✓	137.00					2.74	134.26
	10	Notes Payable	First National Bank	41	1,000.00								1,000.00
		Interest Expense	" " "	19	20.00								20.00
	15	Wages & Salaries	Week ending Dec. 14					1,209.10		181.36	24.18		1,003.56
	18	Freight In	Baltimore & Ohio						40.70				40.70
	19	Purchases—Dept. A	Beale & Co.	70	211.50								211.50
	22	Wages & Salaries	Week ending Dec. 21					776.00		116.40	15.52		644.08
		Freight In	Baltimore & Ohio						23.11				23.11
	28	Young & Co.	Bill Dec. 23			✓	389.41					19.47	369.94
	29	Wages & Salaries	Week ending Dec. 28					1,165.14		174.78	23.30		967.06
	31	Freight In	Baltimore & Ohio						26.09				26.09
					1,253.60		1,564.39	3,575.24	142.30	536.29	71.50	58.29	5,869.45
							(40)	(61)	(14)	(44)	(45)	(73)	(1)

By using additional columns the principle of "posting column totals" can be advantageously applied to other accounts which must be frequently debited or credited. The manner by which the cash payments book can be expanded to accomplish this objective is illustrated by the eight-column cash payments book on page 171 and the eleven-column cash payments book on page 159.

The Multiple-Column Journal

In the preceding pages extra columns have been generously employed to expand the cash receipts and cash payments books. Extra columns may also be used to expand the general journal but, for this book of original entry, expansion is often not as necessary as for the other books of original entry. Indeed, for many businesses, the two-column journal is entirely satisfactory. However, if a business has a large volume of sales and purchase transactions involving many personal accounts with customers and creditors, it is quite likely that controlling accounts will be used. When this is the case, the journal in all probability will have six or more columns. This form of journal is illustrated by the two examples shown below.

JOURNAL

DEBIT					CREDIT		
Accounts Payable	*Accounts Receivable*	*General Ledger*	DATE	L.F.	*General Ledger*	*Accounts Receivable*	*Accounts Payable*

JOURNAL

DATE		L.F.	DEBIT		CREDIT					
			General	*Accounts Payable*	*Accounts Receivable*				*General*	L.F.
					A–E	*F–L*	*M–R*	*S–Z*		

How Many Columns?

Most of the special columns generally employed in the cash books of a business have been illustrated in this chapter. In many cases, however, the principle of columnar utilization is extended to include even more money columns. Determination of the proper number of columns to be incorporated in any given book of original entry is a question whose answer is contingent upon the characteristics of the business to which the columns relate.

Individual needs vary widely. Some businesses require more columns than others, some require columns for one purpose, and some for another. For example, where occasion demands, the cash receipts book might even be constructed to include additional *debit* columns—for bank charges, freight allowances, interest expense, and so on.

As a general rule, a special column—in any book of original entry—should be employed whenever its use leads to economies in the recording and posting of transactions. Typical of the possibilities in this direction are the two cash books on page 159. All of the columns in these cash books are posted in total except the Miscellaneous columns—which are posted in detail.

It should be observed that even in columnar records as complex as those on page 159, the rule of double entry is carefully observed. The only difference is a change in the form by which the double-entry equation is recognized in the recording process.

Before the totals of any columnar book are posted, the bookkeeper should determine that the sum of the debit totals of each book is equal to the sum of the credit totals. This is a check of great importance and should never be omitted.

If a business has *two* or more bank accounts, the cash column in each cash book may be replaced by one column for each bank account. An *alternative* arrangement in the cash receipts book would be to use one cash column, and one *memorandum* column for each bank in which deposits are made. The cash payments book, similarly, would have one cash column, and one *memorandum* column for each bank on which checks are drawn.

Cash Journal

In order to avoid the use of *several* books of original entry (as illustrated in Chapters 7 and 8), many small- and medium-sized businesses use only *one* book of original entry, this book representing a consolidation of the sales, purchases, cash receipts, and cash payments books, and the journal. This is done without losing the accounting advantages normally associated with several individual books of original entry. This *single* book of original entry, usually called the cash journal (or cash book and journal, or synoptic journal), is essentially a multiple-column book of original entry, sometimes utilizing as many as 20 or 30 debit and credit columns. *All* transactions are recorded in this one book of original entry. An accounting record of this kind is particularly adapted to businesses or organizations whose transactions and accounting requirements are relatively simple as, for example, small retail businesses, clubs, churches, and so on.

One example of a cash journal is illustrated on pages 160–161; the transactions used are those of L. T. Robinson as detailed on page 135. After this cash journal has been posted, the trial balance and financial statements will be identical with those illustrated on pages 140–141.

CASH RECEIPTS BOOK

Page 1

DATE	ACCOUNT CREDITED	EXPLANATION	L.F.	CREDIT						DEBIT	
				Miscellaneous	L.F.	*Accounts Receivable*	*Interest Income*	*Notes Receivable*	*Sales*	*Sales Discounts*	*Cash*

CASH PAYMENTS BOOK

Page 1

DATE	ACCOUNT DEBITED	EXPLANATION	L.F.	DEBIT									CREDIT	
				Miscellaneous	L.F.	*Accounts Payable*	*Advertising*	*Freight In*	*Interest Expense*	*Notes Payable*	*Purchases*	*Wages & Salaries*	*Traveling Expense*	*Purchase Discounts*	*Cash*

CASH

DEBIT												
Accounts Payable		*Accounts Receivable*	*Cash*	*General Expense*	*Purchases*	*Sales Discounts*	*Selling Expense*	*Wages Expense*	*Miscellaneous*	*L.F.*	*Date*	
			12,000.00								1958 Dec.	1
									4,000.00	3		
									300.00	17		
									1,200.00	4		2
	✓	2,378.00										3
					5,000.00							5
			181.00									7
					700.00							8
				626.00								9
5,000.00	✓											10
	✓	489.00										12
			2,354.22			23.78						13
	✓	835.00										14
					2,270.00							15
									100.00	10		16
					3,330.00							17
	✓	558.00										19
	✓	1,311.00										
									200.00	7		20
			385.11			3.89						21
			826.65			8.35						23
			63.00									26
1,000.00	✓											27
												29
	✓	1,438.00										31
								500.00				
6,000.00		7,009.00	15,809.98	626.00	11,300.00	36.02		500.00	5,800.00			
(5)		(2)	(1)	(16)	(13)	(11)		(18)				

DEPARTMENTAL ACCOUNTS AND FINANCIAL STATEMENTS

Still another occasion for the use of multiple-column records arises because of management's need for departmental (or product) data. When a business is divided into departments, it is important for management to know the amount of business transacted by, the costs involved for, and the profitability of each department. If the accounting department is to furnish this information successfully, it will be necessary to open

Sales
Returned Sales and Allowances
Purchases
Returned Purchases and Allowances
Freight In
Inventory
Cost of Sales

accounts for each department. These accounts receive the transactions of each department as if the department were virtually an independent business. To expedite the recording process, multiple-column sales and purchases books become indispensable. Illustrations of these books appear below.

JOURNAL

Debit	Credit	Explanation	L.F.	CREDIT: Miscellaneous	Accounts Payable	✓	Accounts Receivable	Cash	Purchases Discounts	Sales
Cash		Investment								
Merchandise Inventory										
	L. T. Robinson, Capital		6	16,000.00						
Rent Expense		For December						300.00		
Furniture and Equipment		Cox & Lloyd, Inc.						1,200.00		
C. F. Ronald		Invoice #1								2,378.00
	James J. Logue				5,000.00	✓				
	Sales	Invoice #2, J. M. Barrie								181.00
Purchases		Exley & Son						700.00		
General Expenses								626.00		
James J. Logue		Bill, December 5						4,900.00	100.00	
Clark R. Morgan		Invoice #3								489.00
	C. F. Ronald	Invoice #1, Dec. 3				✓	2,378.00			
E. V. Sanders		Invoice #4								835.00
	James J. Logue				2,270.00	✓				
Returned Sales & Allowances		From sale of Dec. 12, invoice #3				✓	100.00			
	Clark R. Morgan									
	Henry V. Dana				3,330.00	✓				
C. F. Ronald		Invoice #5								558.00
M. G. Sheldon		Invoice #6								1,311.00
L. T. Robinson, Personal								200.00		
	Clark R. Morgan	Balance of account				✓	389.00			
	E. V. Sanders	Invoice #4, Dec. 13				✓	835.00			
	Commission Income	Baxter & Co. consignment	19	63.00						
James J. Logue		On account						1,000.00		
Clark R. Morgan		Invoice #7								1,438.00
Wages Expense		December payroll						500.00		
				16,063.00	10,600.00		3,702.00	9,426.00	100.00	7,190.00
					(5)		(2)	(1)	(15))	(9)

Multiple-Column Departmental Sales and Purchases Books

Special columns are used in the sales and purchases books for the purpose of classifying sales and purchases transactions at the time of their original entry. The sales book, for example, might appear as follows:

SALES BOOK

19—		INVOICE NO.		✓	DEBIT: Accounts Receivable	CREDIT: Sales — Dept. A	Dept. B	Dept. C
Dec.	1	187	G. R. Kinsey	✓	342.50	187.50	155.00	
	5	188	M. D. Honting	✓	104.67			104.67
	8	189	E. L. Lang	✓	242.10	227.14	10.06	4.90
	11	190	R. G. Wood	✓	207.00	54.00		153.00
	15	191	Homer & Son	✓	188.42		188.42	
	19	192	R. G. Wood & Co.	✓	319.21	319.21		
	21	193	Payne & Company	✓	414.90	200.02	117.88	97.00
	26	194	G. R. Kinsey	✓	382.12	273.98		108.14
	27	195	May & May	✓	516.07	500.00		16.07
	29	196	J. J. Jackson	✓	598.71		598.71	
	31	197	Homer & Son	✓	122.11			122.11
					3,437.81	1,761.85	1,070.07	605.89
					(2)	(80)	(81)	(82)

This sales book would be posted as follows:

DEBIT (at the end of the month):
Accounts Receivable for column total $3,437.81

Note: Each customer's account in the subsidiary ledger would be debited for the individual amounts indicated.

CREDIT (at the end of the month):
Sales—Department A, for column total 1,761.85
Sales—Department B, for column total 1,070.07
Sales—Department C, for column total 605.89

Ledger pages to which the column totals have been posted are shown in parentheses. Postings to subsidiary ledger accounts are indicated by check marks.

The purchases book would be similarly constructed:

PURCHASES BOOK

				CREDIT	DEBIT		
					Purchases		
				Accounts Payable	Dept. A	Dept. B	Dept. C
19—							
Dec.	7	C. T. Williams	✓	428.15	103.12	98.22	226.81
	12	Emory A. Adams	✓	300.77		300.77	
	17	L. S. Mortimer	✓	721.36	214.77	404.70	101.89
	19	Briggs & Briggs	✓	111.80	27.10		84.70
	23	Young & Company, Inc.	✓	389.41	148.98		240.43
	27	Emory A. Adams	✓	27.22		27.22	
	31	Hugh A. McNeil	✓	212.20	57.14		155.06
				2,190.91	551.11	830.91	808.89
				(22)	(70)	(71)	(72)

This purchases book would be posted as follows:

DEBIT (at the end of the month):
Purchases—Department A, for column total . . . . . $ 551.11
Purchases—Department B, for column total 830.91
Purchases—Department C, for column total 808.89

CREDIT (at the end of the month):
Accounts Payable, for column total 2,190.91

Note: Each seller's account in the subsidiary ledger would be credited for the individual amounts indicated.

Merchandise returns and allowances require similar departmental analysis. If separate books are kept for sales returns and allowances, and purchases returns and allowances, they should be planned in accordance with the columnar principles illustrated above.

Cash Sales for a Departmental Business

With respect to departmental sales, cash sales may be handled as follows:

1. Enter cash sales in the cash receipts book only. When this method is used, and cash sales are numerous, the cash receipts book should have one

sales column for each department. If there are very many departments, however, the cash receipts book may become so wide that it is unwieldy and, accordingly, it may be better to use one of the methods below.

2. Handle cash sales like sales on account.

3. Enter cash sales in the cash receipts book and also in the sales book. The debits to Cash from the sales book and the credits to Sales from the cash receipts book are *not* posted. When this method of accounting is used, it is advisable to use a separate column in the sales book for the debits to Cash; and to use a separate column in the cash receipts book for the credits to Sales, thus:

SALES BOOK

DATE	DEBIT ACCOUNT OF	L.F.	DEBIT		CREDIT	
			Accounts Receivable	*Cash*[a]	*Sales Dept. A*	*Sales Dept. B*

CASH RECEIPTS BOOK

DATE	ACCOUNT CREDITED	EXPLANATION	L.F.	CREDIT				DEBIT	
				Miscellaneous	L.F.	*Accounts Receivable*	*Sales*[a]	*Sales Discounts*	Cash

[a] This column is not posted, either in detail or in total.

Cash Purchases for a Departmental Business

With respect to departmental purchases, cash purchases may be handled as follows:

1. Enter cash purchases in the cash payments book only. When this method is used, and cash purchases are numerous, the cash payments book should have one purchases column for each department. If there are very many departments, however, the cash payments book may become so wide that it is unwieldy and, accordingly, it may be better to use one of the methods below.

2. Handle cash purchases like purchases on account.

3. Enter cash purchases in the cash payments book and also in the purchases book. The credits to Cash from the purchases book and the debits to Purchases from the cash payments book are *not* posted. When this method of accounting is used, it is advisable to use a separate column in the purchases book for the credits to Cash, and to use a separate column in the cash payments book for the debits to Purchases.

Departmental Statement of Income

After transactions have been recorded in the multiple-column books of original entry of a departmental business, and posted to the ledger, the trial balance and financial statements are readily prepared. One example of a departmental statement of income is shown below.

Blank & Company

STATEMENT OF INCOME FOR THE MONTH OF JANUARY, 19__

	DEPT. A	DEPT. B	DEPT. C	TOTAL
Sales	$8,233.00	$12,014.00	$4,954.00	$25,201.00
Less Returned Sales and Allowances	65.00	117.00	32.00	214.00
	$8,168.00	$11,897.00	$4,922.00	$24,987.00
Cost of Sales	5,490.00	6,880.00	3,622.00	15,992.00
Gross Profit	$2,678.00	$ 5,017.00	$1,300.00	$ 8,995.00
Selling Expenses:				
Advertising Expense				$ 1,287.00
Delivery Expense				848.00
Salaries				2,062.00
Traveling Expense				716.00
				$ 4,913.00
General Expenses:				
Bad Debts				$ 169.00
Insurance				162.00
Miscellaneous				310.00
Salaries				1,168.00
Rent				300.00
				$ 2,109.00
				$ 7,022.00
Net Profit from Operations				$ 1,973.00
Other Income:				
Interest Income				29.00
				$ 2,002.00
Other Expense:				
Taxes on Idle Land				51.00
				$ 1,951.00
Provision for Income Taxes				951.00
Net Income				$ 1,000.00

Another example of a departmental statement of income appears below. In this example the departmental net operating profits are determined by allocating direct and indirect expenses to departments.

Blank & Company

STATEMENT OF INCOME FOR THE MONTH OF JANUARY, 19__

	DEPT. A	DEPT. B	DEPT. C	TOTAL
Sales	$8,233.00	$12,014.00	$4,954.00	$25,201.00
Less Returned Sales and Allowances	65.00	117.00	32.00	214.00
	$8,168.00	$11,897.00	$4,922.00	$24,987.00
Cost of Sales	5,490.00	6,880.00	3,622.00	15,992.00
Gross Profit	$2,678.00	$ 5,017.00	$1,300.00	$ 8,995.00
Selling Expenses:				
Advertising Expense	$ 380.00	$ 822.00	$ 85.00	$ 1,287.00
Delivery Expense	339.00	339.00	170.00	848.00
Salaries	588.00	1,145.00	329.00	2,062.00
Traveling Expense	218.00	395.00	103.00	$ 716.00
	$1,525.00	$ 2,701.00	$ 687.00	$ 4,913.00
General Expenses:				
Bad Debts	$ 55.00	$ 105.00	$ 9.00	$ 169.00
Insurance	43.00	89.00	30.00	162.00
Miscellaneous	68.00	208.00	34.00	310.00
Salaries	283.00	768.00	117.00	1,168.00
Rent	100.00	140.00	60.00	300.00
	$ 549.00	$ 1,310.00	$ 250.00	$ 2,109.00
	$2,074.00	$ 4,011.00	$ 937.00	$ 7,022.00
Net Profit from Operations	$ 604.00	$ 1,006.00	$ 363.00	$ 1,973.00
Other Income:				
Interest Income				29.00
				$ 2,002.00
Other Expense:				
Taxes on Idle Land				51.00
				$ 1,951.00
Provision for Income Taxes				951.00
Net Income				$ 1,000.00

Allocation of Direct and Indirect Expenses to Departments

How were expenses allocated to departments in the statement of income above? As far as it is practicable to do so, expenses should be recorded on a departmental basis at the time of their original recording, thus:

Traveling Expense—Department A
Traveling Expense—Department B
Traveling Expense—Department C

In many cases, however, it is not practicable to distribute expenses to departments as they are incurred. Examples of such expenses are advertising, donations, executive salaries, experimental expenses, rent, property taxes, and so on. In cases of this kind, the expenditure should be originally debited to a single expense account—like Rent Expense—and, at the end of the month, the balance of the account would be distributed to departments upon some equitable basis. Usually the distribution is limited to the statement of income. The following examples illustrate three common bases for the apportionment of expenses:

Insurance may be prorated to departments in the ratio of insurable values within each department.

Rent may be distributed to departments in the ratio of floor space occupied by each department, thus:

	Floor Space		*Apportionment of*
Department	*Square Feet*	*Ratio*	*Rent Expense*
A	10,687	48.6%	$ 486.00
B	8,743	39.7	397.00
C	2,570	11.7	117.00
	22,000	100.0%	$1,000.00

Property taxes may be distributed to departments on the basis of taxable valuations within each department.

Some indirect expenses, for which satisfactory distribution bases are difficult to establish, may often be apportioned to departments in the ratio of

1. total of direct expenses debited to the several departments, or
2. sales by departments.

These ratios can be recommended only when they are the best ratios available and when they are considered as fair distribution bases. Sales, for instance, cannot always be regarded as a satisfactory basis for the distribution of expenses because expenses in the several departments may not have been actually incurred in proportion to sales.

Many businesses do not compute departmental net profits. They maintain that departmental values are not reliable because many important expenses cannot be accurately apportioned to departments. And without accurate apportionments, they say, there can be no such thing as complete accuracy and utility in the departmental figures which purport to represent net profits from operations. Accordingly, these businesses are content to determine gross profits by departments only.

While some merit attaches to a position of this kind, it would appear proper to compute net profit figures by departments whenever they can be determined with reasonable accuracy because net profit figures, in the last analysis, are the proof of successful merchandising. Scientific exactness is not necessarily required to make net profit figures of value to the manage-

ment of a business. Aside from being measures of departmental profitability, the net profit figures will also be serviceable to management if they can be used to reveal the financial trends and tendencies of business activity.

CLOSING ENTRIES At the end of an accounting *year*, the merchandise accounts of each department will be closed almost as if each department were a separate business. The merchandise accounts of a particular department —Department A, for example—would be closed as follows:

Cost of Sales—Department A	xxx xx	
Inventory—Department A		xxx xx
To close old inventory.		
Cost of Sales—Department A	xxx xx	
Returned Purchases and Allowances—Department A	xxx xx	
Purchases—Department A		xxx xx
Freight In—Department A		xxx xx
To close latter three accounts.		
Inventory—Department A	xxx xx	
Cost of Sales—Department A		xxx xx
To record new inventory.		
Profit and Loss	xxx xx	
Cost of Sales—Department A		xxx xx
To close latter account.		
Sales—Department A	xxx xx	
Returned Sales and Allowances—Department A		xxx xx
Profit and Loss		xxx xx
To close sales accounts.		

The sales, purchases, and other merchandise accounts of each of the other departments of a business would be closed in a similar manner.

At this point it is well to observe, parenthetically, that the benefits of departmental analyses may be enjoyed without having individual expense analyses incorporated in the individual accounts of the ledger. If the books provide the *primary* information required, the required departmental expenses analyses may be limited to the statement of income. When this is done, the actual procedures of bookkeeping for a business can be maintained on a relatively simple basis. And, in the procedures of closing, all departmental sales and cost-of-sales accounts would be closed into a single profit and loss account.

Purchases Book: A Further Expansion of Function

Up to the present point, the purchases book has been used exclusively for the recording of purchases of merchandise on account.

Sometimes the purchases book is expanded so as to include the purchase of all commodities and services. When the purchases book functions in this manner, it is often called an Invoice Register or Voucher Register.

As a contribution to effective internal control over the funds of a business, all invoices must be approved and recorded in the Invoice Register before they can be paid. Approval, recording, and payment are the responsibilities of different employees.

One example of an Invoice Register appears below. A more elaborate example (of the voucher register) is illustrated in Chapter 21.

INVOICE REGISTER

DATE	BILL NO.	PAYEE	CREDIT	DEBIT								
			Accounts Payable	*Purchases*	*Frt. In*	*Advertising*	*Trav. Exp.*	*General Expense*	*Utilities Expense*	*Sundry Accounts*		
										Amount	*L.F.*	*Name*

Illustrative Problem

The transactions of the business of John C. Hamilton for the month of December, 1958, appear on pages 168–169. The books of Mr. Hamilton, reproduced on pages 170–175, are based upon these transactions. His books illustrate especially the following practices:

1. The employment of five multiple-column books of original entry for a departmental business. Two controlling accounts are used, one for accounts receivable and one for accounts payable.
2. The general and subsidiary ledgers after all transactions have been posted.

The accounts in the general ledger are arranged in the order of their appearance on the financial statements; the accounts of the balance sheet appear first, then the accounts of the statement of income. Cash, as the most liquid of assets, appears first because it is first in the balance sheet. Noncash current assets appear in the order in which they are expected to be converted into cash in the normal operations of business. Then appear accounts representing, in order, fixed assets, current liabilities, and proprietary accounts. Profit and loss accounts follow in the order of their appearance on the statement of income.

December

1 John C. Hamilton began business with cash $12,000.00; merchandise, $4,000.00. (Dept. A, $2,400.00; Dept. B, $1,600.00.) Paid rent for the month of December, $300.00.

2 Bought furniture and equipment from Carter & Son for cash, $1,200.00.

3 Sold merchandise on account to C. F. Ryan, invoice #1, $2,378.00. (Dept. A, $1,498.00; Dept. B, $880.00.) Terms n/30.

5 Purchased merchandise on account from Charles R. Lucas, $5,000.00. (Dept. A, $3,740.00; Dept. B, $1,260.00.) Terms 5/10, n/30.

7 Sold merchandise for cash to J. M. Becker, invoice #2, $181.00. (Dept. A, $141.00; Dept. B, $40.00.)

8 Purchased merchandise for cash from Field & Glade, Inc., $700.00. (Dept. A, $300.00; Dept. B, $400.00.)

9 Paid general expenses, $626.00.

10 Mailed a check to Charles R. Lucas in payment of merchandise purchased December 5, $5,000.00, less 2%.

12 Sold merchandise on account to Martin & Son, invoice #3, $489.00. (Dept. A, $180.00; Dept. B, $309.00.) Terms 1/10, n/30.

13 Received a check from C. F. Ryan in payment of invoice #1, $2,378.00, less 1%.

14 Sold merchandise on account to Simmons & Gray, invoice #4, $835.00. (Dept. A, $312.00; Dept. B, $523.00.) Terms n/30.

15 Purchased merchandise on account from Charles R. Lucas, $2,270.00. (Dept. A, $470.00; Dept. B, $1,800.00.) Terms n/60.

16 Martin & Son returns merchandise (sold on December 12) because of its unsatisfactory quality, $100.00. (Dept. A, $38.00; Dept. B, $62.00.)

17 Purchased merchandise on account from Henry E. Dresser, $3,330.00. (Dept. A, $1,384.00; Dept. B, $1,946.00.) Terms n/60.

19 Sold merchandise on account to C. F. Ryan, invoice #5, $558.00. (Dept. A, $558.00.) Terms n/30.

Sold merchandise on account to David T. Spencer, invoice #6, $1,311.00. (Dept. A, $409.00; Dept. B, $902.00.) Terms n/30.

20 Mr. Hamilton withdrew cash for his personal use, $200.00.

21 Received a check from Martin & Son in payment of balance of his account (and invoice #3), $389.00, less 1%.

23 Received a check from Simmons & Gray in payment of sale of December 14, invoice #4, $835.00, less 1%.

26 Received a check for $63.00 as commission earned on the sale of merchandise received on consignment from Blaine & Co.

27 Mailed a check to Charles R. Lucas in part payment of account, $1,000.00.

29 Sold merchandise on account to Martin & Son, invoice #7, $1,438.00. (Dept. A, $600.00; Dept. B, $838.00.) Terms n/30.

31 Wages are paid, $500.00 less withholding income taxes, $90.00 and withholding social security taxes (O.A.S.I.), $10.00.

The merchandise on hand at the close of business, December 31, 1958, was valued at cost, $10,692.00. (Dept. A, $5,800.00; Dept. B, $4,892.00.)

SALES BOOK — Page 1

		INVOICE NO.			DEBIT Accounts Receivable	CREDIT Sales Dept. A	CREDIT Sales Dept. B
1958							
Dec.	3	1	C. F. Ryan	✓	2,378.00	1,498.00	880.00
	12	3	Martin & Son	✓	489.00	180.00	309.00
	14	4	Simmons & Gray	✓	835.00	312.00	523.00
	19	5	C. F. Ryan	✓	558.00	558.00	
		6	David T. Spencer	✓	1,311.00	409.00	902.00
	29	7	Martin & Son	✓	1,438.00	600.00	838.00
					7,009.00	3,557.00	3,452.00
					(2)	(12)	(13)

PURCHASES BOOK — Page 1

				DEBIT Accounts Payable	DEBIT Purchases Dept. A	DEBIT Purchases Dept. B
1958						
Dec.	5	Charles R. Lucas	✓	5,000.00	3,740.00	1,260.00
	15	Charles R. Lucas	✓	2,270.00	470.00	1,800.00
	17	Henry E. Dresser	✓	3,330.00	1,384.00	1,946.00
				10,600.00	5,594.00	5,006.00
				(6)	(19)	(20)

JOURNAL — Page 1

ACCOUNTS PAYABLE	ACCOUNTS RECEIVABLE	GENERAL LEDGER					GENERAL LEDGER	ACCOUNTS RECEIVABLE	ACCOUNTS PAYABLE
			1958						
		2,400.00	Dec.	1	Inventory—Dept. A	3			
		1,600.00			Inventory—Dept. B	4			
					John C. Hamilton, Capital	9	4,000.00		
					Began business today with an investment of				
					$ 4,000.00 merchandise				
					12,000.00 cash (see CRl)				
					$16,000.00				
		38.00		16	Returned Sales & Allowances—Dept. A	14			
		62.00			Returned Sales & Allowances—Dept. B	15			
					Martin & Sons	✓		100.00	
					For merchandise returned from sale of December 12 (invoice #3) because of inferior quality.				
		4,100.00					4,000.00	100.00	
								(2)	

CASH RECEIPTS BOOK

Page 1

					CREDIT					DEBIT	
					Miscellaneous		*Accounts Receivable*	*Sales Dept. A*	*Sales Dept. B*	*Sales Discounts*	*Cash*
1958											
Dec.	1	John C. Hamilton, Capital	Cash investment	7	12,000.00						12,000.00
	7	Sales	J. M. Barrie, invoice #2					141.00	40.00		181.00
	13	C. F. Ryan	Balance of account			✓	2,378.00			23.78	2,354.22
	21	Martin & Son	Balance of account			✓	389.00			3.89	385.11
	23	Simmons & Gray	Invoice #4, Dec. 14			✓	835.00			8.35	826.65
	26	Commission Income	Baxter & Co. consignment	27	63.00						63.00
					12,063.00		3,602.00	141.00	40.00	36.02	15,809.98
							(2)	(12)	(13)	(16)	(1)

CASH PAYMENTS BOOK

Page 1

					DEBIT				CREDIT			
					Miscellaneous		*Accounts Payable*	*Purchases Dept. A*	*Purchases Dept. B*	*Withholding Income Taxes Payable*	*Withholding S.S. Taxes Payable*	*Purchases Discounts*	*Cash*
1958													
Dec.	1	Rent Expense	December rent	25	300.00								300.00
	2	Furniture and Equipment	Cox & Lloyd, Inc., bill	5	1,200.00								1,200.00
	8	Purchases	Exley & Son					300.00	400.00				700.00
	9	General Expense		24	626.00								626.00
	10	Charles R. Lucas	Bill, Dec. 5			✓	5,000.00						4,900.00
	20	John C. Hamilton, Personal		10	200.00							100.00	200.00
	27	Charles R. Lucas	On account			✓	1,000.00						1,000.00
	31	Wages Expense	December payroll	26	500.00					90.00	10.00		400.00
					2,826.00		6,000.00	300.00	400.00	90.00	10.00	100.00	9,326.00
							(6)	(19)	(20)	(7)	(8)	(28)	(1)

JOURNAL — Page 1

CASH — 1

1958					1958				
Dec.	31		CR1	15,809.98	Dec.	31		CP1	9,326.00

ACCOUNTS RECEIVABLE — 2

1958					1958				
Dec.	31		S1	7,009.00	Dec.	16		J1	100.00
						31		CR1	3,602.00

INVENTORY—DEPT. A — 3

1958									
Dec.	1		J1	2,400.00					

INVENTORY—DEPT. B — 4

1958									
Dec.	1		J1	1,600.00					

FURNITURE AND EQUIPMENT — 5

1958									
Dec.	2		CP1	1,200.00					

ACCOUNTS PAYABLE — 6

1958					1958				
Dec.	31		CP1	6,000.00	Dec.	31		P1	10,600.00

WITHHOLDING INCOME TAXES PAYABLE — 7

					1958				
					Dec.	31		CP1	90.00

WITHHOLDING SOCIAL SECURITY TAXES PAYABLE — 8

					1958				
					Dec.	31		CP1	10.00

JOHN C. HAMILTON, CAPITAL — 9

					1958				
					Dec.	1		CR1	12,000.00
								J1	4,000.00

JOHN C. HAMILTON, PERSONAL — 10

1958									
Dec.	20		CP1	200.00					

PROFIT AND LOSS 11

Date		Item	Ref.	Debit			Credit	

SALES—DEPT. A 12

Date		Item	Ref.	Debit			Credit	
1958 Dec.	31						CR1	141.00
							S1	3,557.00

SALES—DEPT. B 13

Date		Item	Ref.	Debit			Credit	
1958 Dec.	31						CR1	40.00
							S1	3,452.00

RETURNED SALES AND ALLOWANCES—DEPT. A 14

Date		Item	Ref.	Debit			Credit	
1958 Dec.	16		J1	38.00				

RETURNED SALES AND ALLOWANCES—DEPT. B 15

Date		Item	Ref.	Debit			Credit	
1958 Dec.	16		J1	62.00				

SALES DISCOUNTS 16

Date		Item	Ref.	Debit			Credit	
1958 Dec.	31		CR1	36.02				

COST OF SALES—DEPT. A 17

Date		Item	Ref.	Debit			Credit	

COST OF SALES—DEPT. B 18

Date		Item	Ref.	Debit			Credit	

PURCHASES—DEPT. A 19

Date		Item	Ref.	Debit			Credit	
1958 Dec.	31		CP1	300.00				
			P1	5,594.00				

PURCHASES—DEPT. B 20

Date		Item	Ref.	Debit			Credit	
1958 Dec.	31		CP1	400.00				
			P1	5,006.00				

RETURNED PURCHASES AND ALLOWANCES—DEPT. A 21

RETURNED PURCHASES AND ALLOWANCES—DEPT. B 22

PURCHASES DISCOUNTS 23

					1958	Dec.	31		CP1		100.00

GENERAL EXPENSE 24

1958 Dec.	9			CP1	626.00						

RENT EXPENSE 25

1958 Dec.	1			CP1	300.00						

WAGES EXPENSE 26

1958 Dec.	31			CP1	500.00						

COMMISSION INCOME 27

					1958	Dec.	26		CR1		63.00

ACCOUNTS RECEIVABLE LEDGER

MARTIN & SON

1958 Dec.	12			S1	489.00	1958 Dec.	16		J1		100.00
	29			S1	1,438.00		21		CR1		389.00

C. F. RYAN

1958 Dec.	3			S1	2,378.00	1958 Dec.	13		CR1		2,378.00
	19			S1	558.00						

SIMMONS & GRAY

1958 Dec.	14			S1	835.00	1958 Dec.	23			CR1	835.00

DAVID T. SPENCER

1958 Dec.	19			S1	1,311.00						

ACCOUNTS PAYABLE LEDGER

HENRY E. DRESSER

						1958 Dec.	17			P1	3,330.00

CHARLES R. LUCAS

1958 Dec.	10			CP1	5,000.00	1958 Dec.	5			P1	5,000.00
	27			CP1	1,000.00		15			P1	2,270.00

The trial balance, the statement of income, and the balance sheet, as prepared from these accounts, are shown below.

John C. Hamilton

TRIAL BALANCE, DECEMBER 31, 1958

Cash	$ 6,483.98	
Accounts Receivable	3,307.00	
Inventory—Dept. A	2,400.00	
Inventory—Dept. B	1,600.00	
Furniture and Equipment	1,200.00	
Accounts Payable		$ 4,600.00
Withholding Income Taxes Payable		90.00
Withholding Social Security Taxes Payable		10.00
John C. Hamilton, Capital		16,000.00
John C. Hamilton, Personal	200.00	
Sales—Dept. A		3,698.00
Sales—Dept. B		3,492.00
Returned Sales and Allowances—Dept. A	38.00	
Returned Sales and Allowances—Dept. B	62.00	
Sales Discounts	36.02	
Purchases—Dept. A	5,894.00	
Purchases—Dept. B	5,406.00	
Purchases Discounts		100.00
General Expense	626.00	
Rent Expense	300.00	
Wages Expense	500.00	
Commission Income		63.00
	$28,053.00	$28,053.00

John C. Hamilton

STATEMENT OF INCOME FOR THE MONTH OF DECEMBER, 1958

	DEPT. A	DEPT. B	TOTAL
Sales	$3,698.00	$3,492.00	$ 7,190.00
Less Returned Sales and Allowances	38.00	62.00	100.00
	$3,660.00	$3,430.00	$ 7,090.00
Sales Discounts			36.02
			$ 7,053.98
Cost of Sales:			
Inventory, December 1, 1958	$2,400.00	$1,600.00	$ 4,000.00
Purchases	5,894,00	5,406.00	11,300.00
	$8,294.00	$7,006.00	$15,300.00
Inventory, December 31, 1958	5,800.00	4,892.00	10,692.00
	$2,494.00	$2,114.00	$ 4,608.00
	$1,166.00	$1,316.00	
Less Purchases Discounts			100.00
			$ 4,508.00
Gross Profit			$ 2,545.98
Expenses:			
General Expense			$ 626.00
Rent Expense			300.00
Wages Expense			500.00
			$ 1,426.00
Net Profit from Operations			$ 1,119.98
Other Income:			
Commission Income			63.00
Net Income			$ 1,182.98

John C. Hamilton

BALANCE SHEET, DECEMBER 31. 1958

Assets		*Liabilities and Capital*	
Current Assets:		Current Liabilities:	
Cash	$ 6,483.98	Accounts Payable	$ 4,600.00
Accounts Receivable	3,307.00	Withholding Income Taxes Payable	90.00
Inventory	10,692.00	Withholding Social Security Taxes Payable	10.00
	$20,482.98		$ 4,700.00
Fixed Assets:			
Furniture and Equipment	1,200.00	Capital:	
	$21,682.98	John C. Hamilton, Capital	16,982.98
			$21,682.98

COMMENTARY ON CASH DISCOUNTS In the illustrative departmental statement of income above, cash discounts were *not* segregated by departments. This occurred because, on remittance dates, the segregation of

cash discounts by departments is a matter of considerable difficulty. A very good example of the difficulty of apportioning cash discounts by departments is afforded by an analysis of the cash received from Martin & Son on December 12, 1958, $385.11:

	Dept. A	*Dept. B*	*Total*
Invoice December 12	$189.00	$309.00	$489.00
Less Credit memorandum Dec. 12	38.00	62.00	100.00
Balance of account	$142.00	$247.00	$389.00
Sales discount	1.42	2.47	3.89
Cash received	$140.58	$244.53	$385.11

Actually, it would be better accounting if all sales and purchases were recorded in the books of original entry at *net cash prices*. In this respect invoices to customers might be patterned so as to show net cash prices in the same manner as bills for electricity and gas: gross $_____ discount $_____ net $_____. By this billing and accounting procedure, the values for sales and purchases would appear in income statements—including departmental income statements—at values net *after* sales and purchases discounts.

By this procedure, too, managerial attention can be directed toward those purchase discounts which have been *lost*. If, for one reason or another, bills for purchases should be paid in full—at their gross values—the cash discounts lost would be debited to Purchases Discounts Lost, an account of considerable significance to management. For example, assume that a purchase invoice carries terms of 2/10, n/30 and that the purchaser forfeits the 2% cash discount allowed for payment of the bill within 10 days. Instead, he takes the full 30 days of credit allowed and then pays the bill in full (i.e., without a deduction for discount). This means that, for another 20 days of credit, the purchaser pays an extra 2%. This extra cost of 2% is equivalent to a cost of 36% per year!

PROBLEMS

Problem 9–1. The Plainfield Sales Company operates a business with three departments. In summary form, its operations for the year ended December 31, 19__, were as follows:

	Dept. #1	*Dept. #2*	*Dept. #3*	*Total*
Sales	$100,000.00	$40,000.00	$60,000.00	$200,000.00
Cost of Sales	50,000.00	29,000.00	36,000.00	115,000.00
Gross Profit	$ 50,000.00	$11,000.00	$24,000.00	$ 85,000.00
Selling and General Expenses:				
Variable (with sales)	$ 20,000.00	$ 7,000.00	$10,000.00	$ 37,000.00
Not variable	7,000.00	5,000.00	6,000.00	18,000.00
	$ 27,000.00	$12,000.00	$16,000.00	$ 55,000.00
Net Profit	$ 23,000.00	($ 1,000.00)	$ 8,000.00	$ 30,000.00

Required

Should Department #2 be eliminated? Why?

Problem 9–2. The following condensed statement of income represents the operations of the Nelson Sales Company for the year 19__:

	Product #1	*Product #2*	*Product #3*	*Total*
Sales	$126,000.00	$88,000.00	$50,000.00	$264,000.00
Less Returned Sales	6,000.00	8,000.00	10,000.00	24,000.00
	$120,000.00	$80,000.00	$40,000.00	$240,000.00
Cost of Sales:				
Inventory, Dec. 31, 19__	$ 10,000.00	$12,000.00	$24,000.00	$ 46,000.00
Purchases	64,000.00	56,000.00	42,000.00	162,000.00
	$ 74,000.00	$68,000.00	$66,000.00	$208,000.00
Inventory, Dec. 31, 19__	14,000.00	20,000.00	36,000.00	70,000.00
	$ 60,000.00	$48,000.00	$30,000.00	$138,000.00
Gross Profit	$ 60,000.00	$32,000.00	$10,000.00	$102,000.00
Selling Expenses	$ 26,000.00	$18,000.00	$ 8,000.00	$ 52,000.00
General Expenses	14,000.00	6,000.00	4,000.00	24,000.00
	$ 40,000.00	$24,000.00	$12,000.00	$ 76,000.00
Net Profit from Operations	$ 20,000.00	$ 8,000.00	($ 2,000.00)	$ 26,000.00
Provision for Income Taxes				13,000.00
Net Income				$ 13,000.00

Required

1. From the standpoint of management, what facts in this departmental statement of income are of particular interest? Would these facts suggest any possible courses of management *action?* Explain.

2. Should Product #3 be dropped? Why? *Note.* General expenses of $24,000.00 are relatively constant and would not be significantly affected by dropping Product #3.

Problem 9–3. Following are the accounts entering into the statement of income of the business of Merrill P. Clark for the calendar year 19__:

Sales—Dept. A		$36,554.00
Sales—Dept. B		73,342.00
Returned Sales—Dept. A	$ 1,288.00	
Returned Sales—Dept. B	1,519.00	
Sales Discounts	912.00	
Merchandise Inventory, January 1, Dept. A	10,022.00	
Merchandise Inventory, January 1, Dept. B	15,996.00	
Purchases—Dept. A	28,016.00	
Purchases—Dept. B	56,263.00	
Returned Purchases—Dept. A		1,078.00
Returned Purchases—Dept. B		3,644.00
Purchases Discounts		2,301.00
Freight In—Dept. A	701.00	
Freight In—Dept. B	1,173.00	
Advertising Expense	5,714.00	
Delivery Expense	4,275.00	

Sales Salaries	8,645.00
Traveling Expense	3,180.00
Bad Debts Expense	750.00
Insurance Expense	724.00
Miscellaneous General Expense	2,138.00
Office Salaries	4,494.00
Property Taxes	1,860.00
Utilities Expense	764.00

Required

Departmental statement of income for the year ended December 31, 19__. Inventories, December 31, 19__: Department A, $15,074.00; Department B, $25,491.00. Allocate values to departments as follows:

	Dept. A	*Dept. B*
Advertising	In ratio of net sales	
Delivery Expense	In ratio of net sales	
Sales Salaries	33⅓	66⅔
Traveling Expense	33⅓	66⅔
Bad Debts Expense	33⅓	66⅔
Insurance Expense	30	70
Miscellaneous General Expense	50	50
Office Salaries	40	60
Property Taxes	30	70
Utilities Expense	40	60
Sales Discounts		100
Purchases Discounts	33⅓	66⅔

Note: For the purpose of this problem, show only round dollars in the statement of income.

Problem 9–4. On December 1, 19__, Glenn A. Walsh began operations by making a cash purchase of the business of Dodge & Gray. Mr. Walsh acquired the following assets at the prices indicated: $3,000.00 of auto parts and accessories; $4,000.00 of tires, tubes, and related items; and $5,000.00 of equipment. The subsequent transactions of Mr. Walsh for the month of December follow.

December

1 He invested cash, $3,000.00.
Paid December rent, $200.00.

2 Sale on account to Jessup & Wilson, $407.00 (parts, $209.00; tires and tubes, $198.00), 1/10, n/30.

5 Gave the *Daily Tribune* a check for advertising, $148.00.

9 Purchase on account from the City Auto Supply Co., $699.00 (parts, $425.00; tires and tubes, $274.00), 5/10, n/60.

10 Sale on account to Price-Melton, Inc., $800.00 (parts, $420.00; tires and tubes, $380.00), 1/10, n/30.

12 Received check from Jessup & Wilson for invoice of December 2, $407.00, less 1%.

15 Cash sale to Price-Melton, Inc., $501.00 (tires and tubes).
17 Purchase on account from the Stanley Tire Co., $200.00 (tires and tubes), 5/10, n/60.
19 Paid City Auto Supply Company for bill of December 9, $699.00, less 5%.
20 Received check from Price-Melton, Inc., for invoice of December 10, $800.00, less 1%.
22 Cash purchase from Daly & Sund, $104.00 (parts, $70.00; tires and tubes, $34.00).
23 Sale on account to Jessup & Wilson, $1,648.00 (parts, $519.00; tires and tubes, $1,129.00), 1/10, n/30.
24 Purchase on account from the Stanley Tire Co., $465.00 (tires and tubes), 5/10, n/60.
26 Sale on account to Jackson Motor Co., $387.00 (tires and tubes), n/30.
27 Paid Stanley Tire Company for bill of December 17, $200.00 less 5%.
28 Paid general expenses, $240.00, and selling expenses, $181.00.
28 Jackson Motor Co. files a claim for $7.00 covering freight which it paid on merchandise shipped them December 26. The claim is found to be correct and a credit of $7.00, accordingly, is passed to their account.
29 Sale on account to Price-Melton, Inc., $1,214.00 (parts, $844.00; tires and tubes, $370.00), 1/10, n/30.
31 Paid Glenn A. Walsh $78.00 as reimbursement for freight bills paid by him (from his private personal funds) on the merchandise purchases of the month (parts, $28.00; tires and tubes, $50.00).
31 Paid wages for December, $804.00.
31 Purchase on account from the City Auto Supply Company, $122.00 (parts, $105.00; tires and tubes, $17.00), 5/10, n/30.

Required

1. Enter the above transactions in five multiple-column books of original entry. Mr. Walsh desires the accounts to be kept in a manner which will permit the computation of gross profits, but not net profits, by departments.

2. Post to the ledger and take a trial balance.

3. Statement of income for the month of December, 19__, showing gross profits by departments. Inventories, December 31, 19__, were auto parts, $2,513.00; tires and tubes, $3,289.00.

4. Balance sheet, December 31, 19__.

Problem 9–5. On January 31, 19__, the trial balance of R. G. Franklin was

R. G. Franklin

TRIAL BALANCE, JANUARY 31, 19__

Cash	$ 3,760.12
Accounts Receivable	13,011.83

Notes Receivable	6,417.17	
Merchandise Inventory—Dept. A	8,110.17	
Merchandise Inventory—Dept. B	1,636.95	
Miscellaneous Equipment	3,800.00	
Office Furniture and Equipment	1,570.00	
Goodwill	10,000.00	
Accounts Payable		$ 8,365.24
Notes Payable		6,039.60
R. G. Franklin, Capital		36,000.00
Sales—Dept. A		21,073.98
Sales—Dept. B		11,814.14
Returned Sales and Allowances—Dept. A	247.24	
Returned Sales and Allowances—Dept. B	48.81	
Purchases—Dept. A	15,005.25	
Purchases—Dept. B	12,707.95	
Returned Purchases and Allowances—Dept. A		160.76
Freight In—Dept. A	636.90	
Freight In—Dept. B	412.14	
Advertising—Dept. A	386.55	
Advertising—Dept. B	309.73	
Delivery Expense	267.00	
Sales Salaries and Wages—Dept. A	895.80	
Sales Salaries and Wages—Dept. B	1,214.27	
Selling Expense—Dept. A	165.00	
Traveling Expense—Dept. A	431.07	
Traveling Expense—Dept. B	518.49	
Miscellaneous Expense	350.00	
Office Expense	480.14	
Office Salaries	532.00	
Rent Expense	425.00	
Utilities Expense	214.14	
Miscellaneous Income		100.00
	$83,553.72	$83,553.72

Required

1. Departmental statement of income for the month ended January 31, 19__. Inventories, January 31: Department A, $7,334.61; Department B, $6,160.25. Delivery expense should be allocated to departments according to gross sales ratios, 64.08% and 35.92%, respectively. Rent expense should be allocated to departments according to floor space: Dept. A, 63%, Dept. B, 37%. All other indirect operating expenses should be allocated to departments in the average ratio that direct expenses have been absorbed by departments at the time of original entry, Dept. A, 47.91%, Dept. B, 52.09%, respectively.
2. Balance sheet, January 31, 19__.
3. How might these January statements be used by management to its advantage?

Chapter 10 ACCOUNT TECHNIQUES

The Ruling of Accounts

PROFIT AND LOSS ACCOUNTS The proper ruling of accounts is best described by the use of examples. The first example will illustrate the ruling of a profit and loss account after it has been closed at the end of the accounting year. The following Rent Expense account will be used for this purpose:

RENT EXPENSE

1958						1958				
Jan.	1		CP1	500.00		Dec.	31	To P & L	J39	6,000.00
Feb.	1		CP3	500.00						
Mar.	1		CP7	500.00						
Apr.	1		CP9	500.00						
May	1		CP12	500.00						
June	1		CP14	500.00						
July	1		CP17	500.00						
Aug.	1		CP22	500.00						
Sept.	1		CP26	500.00						
Oct.	1		CP29	500.00						
Nov.	1		CP32	500.00						
Dec.	1		CP36	500.00						
				6,000.00						6,000.00

BALANCE SHEET ACCOUNTS The following Cash account will be used to illustrate how a balance sheet account may be ruled at the end of the accounting year. Balance sheet accounts, it should be remembered, are never formally "closed" but, occasionally, they may be "balanced."

It is not necessary to "balance" the accounts of the balance sheet but it is often advantageous to do so, especially for individual accounts containing many debit and credit values. The process of "balancing" an asset, liability, or proprietary account usually occurs at the end of an accounting year although, if it is advantageous to do so, any individual account can be "balanced" at any date within the accounting year.

The credit of $4,678.11 shown in the Cash account is the balance of the account; it is offset by a debit below the double ruled lines. It is important to maintain this equality of debit and credit when real accounts are being "balanced." The check mark (✓) serves as a cross reference within the account since no journal entry or accounting transaction is involved.

The very small figures which appear in the debit and credit money columns are cumulative subtotals (recorded in pencil). The figures which appear in the debit explanation column represent the debit balances of the account at the end of the months indicated. They are recorded there so that the balance of the account will be readily available for trial balance purposes. (If an account had a credit balance, the amount of this balance would be placed in the credit explanation column of the account.)

The technique of the preceding paragraph, it should be understood, applies to profit and loss accounts as well as to balance sheet accounts.

CASH

1958						1958					
Jan.	31		3,368.31	CR1	5,846.42	Jan.	31		CP2		2,478.11
Feb.	28		3,277.94	CR4	1,612.87	Feb.	28		CP5		1,703.24
					7,459.29						4,181.35
Mar.	31		3,939.15	CR7	2,482.40	Mar.	31		CP9		1,821.19
					9,941.69						6,002.54
Apr.	30		5,053.89	CR9	3,614.21	Apr.	30		CP12		2,499.47
					13,555.90						8,502.01
May	31		4,309.13	CR12	3,102.44	May	31		CP15		3,847.20
					16,658.34						12,349.21
June	30		3,909.37	CR14	2,949.86	June	30		CP18		3,349.62
					19,608.20						15,698.83
July	31		3,063.45	CR16	3,001.41	July	31		CP22		3,847.33
					22,609.61						19,546.16
Aug.	31		2,144.37	CR17	1,621.99	Aug.	31		CP24		2,541.07
					24,231.60						22,087.23
Sept.	30		2,382.57	CR20	2,448.55	Sept.	30		CP27		2,210.35
					26,680.15						24,297.58
Oct.	31		3,032.19	CR23	2,956.04	Oct.	31		CP31		2,306.42
					29,636.19						26,604.00
Nov.	30		3,336.66	CR26	3,107.11	Nov.	30		CP36		2,802.64
					32,743.30						29,406.64
Dec.	31		4,678.11	CR30	3,982.86	Dec.	31		CP42		2,641.41
					36,726.16						32,048.05
					36,726.16			Balance	✓		4,678.11
											36,726.16
1959											
Jan.	1	Balance		✓	4,678.11						

All of the accounts of a ledger should be adequately detailed as to posting references and dates. The omission of the year date when a transaction is recorded and posted may later on prove to be an omission of considerable importance to the user of an account or to the professional auditor.

Accounts with Customers and Creditors

The following points in the account receivable of Clark & Company, Inc., below, should be noted:

1. Except for the item of June 22, all debit values represent charges for sales.
2. On June 17 a credit memorandum was issued to cover merchandise returned by the customer.
3. On June 30 a check was received in payment of the sales invoice of June 19, 19__. A check mark (✓) was placed opposite the $87.16 debit value and also the $87.16 credit value to show that these values offset each other.
4. At the end of the month of June, the balance of the account was $438.30. This balance was collected July 10, 19__. When this collection was posted, check marks were placed opposite the credit value of $438.30 and the several debit values which were paid.

   The single-line rulings indicate the points at which the account was in balance. The new unpaid balance of the account July 31, 19__, $192.63, is composed of the *unchecked* debit values appearing below the single-line ruling. The July debit total, $253.80, is the sum of all the debit values appearing below the single-line ruling.

Instead of check marks, some bookkeepers use numerals or letters to cross-reference debit and credit values to each other. This is done in order to facilitate the cross-referencing of a particular debit or set of debits with a particular credit or set of credits.

CLARK & COMPANY, INC.

1958						1958					
June	4		S21	✓	174.11	June	17	C/m	RS6	✓	11.82
	11		S21	✓	212.82		30	Ck	CR15	✓	87.16
	16		S22	✓	41.10	July	10	Ck	CR16	✓	438.30
	19		S22	✓	87.16						537.28
	22	Ppd. Frt.	CP38	✓	4.07						
	27	438.30	S23	✓	18.02		25	Ck	CR17	✓	61.17
					537.28						
July	2		S24		114.02						
	7		S25		25.10						
	16		S26		43.24						
	20		S26	✓	61.17						
	31	192.63	S27		10.27						
					253.80						

The explanation columns of a personal account may be used to record the terms of a sales invoice or other significant information.

If, for credit purposes, it is desired to have a customer's account show whether or not cash discounts are being taken, and assuming that this information is not otherwise readily available, the required information may be noted by (1) posting the cash and the cash discount separately in the account, or (2) posting the consolidated amount and prefacing it with the letter *d* in the explanation column to indicate that the cash discount was taken.

In addition to the name, the heading of a customer's account may provide for information such as address, credit limit, and other general data.

Accounts with creditors can be maintained in a manner similar to that illustrated in the Clark & Company, Inc., account.

Correction of Errors

Erasures should not be made in an account or in a book of original entry. Erasures not only tend to detract from the appearance of an accounting record but may suggest that the records have been improperly altered. In legal actions, the importance of the books of original entry as evidence may be weakened if the books have erasures in them.

When a value has been incorrectly recorded, a single line should be drawn through the wrong value and the correct value written just above it, thus:

480.27
~~408.27~~

Alternatively, instead of drawing a single line through the incorrect value, some bookkeepers draw a diagonal line through each of the digits.

If a value has been placed in the wrong account, a line may be drawn through the wrong posting; and the posting then made to the proper account. The correction could also be made by journal entry, thus:

Interest Expense	47.16	
Interest Income		47.16
To correct a posting made to the Interest Income account in error. The debit should have been made to the Interest Expense account.		

In the above discussion, it has been assumed that the error covered the recording of a transaction for a current month, and that the error was discovered before the books of original entry for the current month were ruled and posted. If the error is discovered after the books of original entry have been ruled and posted, the error should be corrected by journal entry.

The Three-Column Account

The following form of account is widely used because it gives the balance of the account after each posting. When bookkeeping machines are used, the account balances are automatically computed after each posting.

CLARK & COMPANY, INC.

1958						
June	4		#871	174.11		174.11
	11		#889	212.82		386.93
	16		#909	41.10		428.03
	17	C/m	RS6		11.82	416.21
	19		#920	87.16		503.37
	22	Prepaid freight	CP38	4.07		507.44
	27		#950	18.02		525.46
	30	Ck	CR15		87.16	438.30
July	2		#969	114.02		552.32
	7		#986	25.10		577.42
	10	Ck	CR16		438.30	139.12
	16		#1016	43.24		182.36
	20		#1035	61.17		243.53
	25	Ck	CR17		61.17	182.36
	31		#1067	10.27		192.63

In this illustration, charges for merchandise are referred to by using invoice numbers rather than the page of the sales book.

The three-column account is used especially in connection with accounts receivable and accounts payable, and with the use of bookkeeping machines. Some bookkeeping machines are so effective that a transaction can be recorded on the customer's statement, in the ledger account, and in the book of original entry—all at *one* impression or recording.

Monthly Statements

At the end of each month (or other billing period) it is common practice for a business to send a statement of account to each of its customers. This statement usually shows

the balance unpaid at the beginning of the month,
the debits and credits recorded in the account during the month, and
the balance unpaid at the end of the month.

The following statement reflects the ledger account of the Bremerton Sales Company on the books of The Chandler-Gordon Company:

THE CHANDLER-GORDON COMPANY
500 First Avenue South
Seattle 1, Washington

Statement of Account December 31, 1957

Bremerton Sales Company
211 Tenth St.
Bremerton, Wash.

Nov.	30	Balance	23.54
Dec.	4		42.81
	6		26.10
	12		114.77
	15		22.65
	22		17.43
	29		9.04
			256.34
	14		- 181.23
	18		- 22.65
			52.46

Reconciliation of the Bank Account

It is usual practice for a bank to furnish each depositor with a monthly statement covering his checking account. This statement, usually furnished as of the last day of each month, shows

the balance at the beginning of the month,
the deposits made during the month,
the checks paid by the bank during the month,
miscellaneous debits and credits for the month, and
the balance at the end of the month.

When the depositor receives his bank statement, he also receives the paid checks charged to his account during the month by the bank, and the debit or credit memoranda in support of miscellaneous debit or credit values placed in his account.

The depositor should reconcile the balance reported by the bank with the balance shown by his Cash account. (It is assumed, here, that all cash receipts of the depositor are deposited in his bank account, preferably daily, and that all of his disbursements of cash are made by check.) Usually a difference will exist because some checks issued by the maker will not have found their way to the bank for payment by the last day of the month. When these unpaid checks have been taken into consideration, the bank balance and Cash account balance should be equal if there are no other adjustments.

To illustrate, L. T. Kellogg began business on February 1, 1958. The balance of his Cash account, $5,027.00, at the close of business February 28, 1958, consisted of the following detail:

CASH RECEIPTS BOOK

1958		
Feb.	2	12,000.00
	4	102.00
	9	28.00
	16	51.00
	21	389.00
	23	85.00
	24	700.00
	27	63.00
		678.00
		250.00
		14,346.00

CASH PAYMENTS BOOK

1958		*Check No.*	
Feb.	3	1	300.00
		2	1,200.00
	10	3	700.00
	12	4	5,000.00
	14	5	510.00
	19	6	116.00
	25	7	62.00
	26	8	200.00
		9	1,000.00
	28	10	231.00
			9,319.00

The bank statement, shown below, is received from the bank as of the close of business, February 28, 1958. The statement shows a balance on deposit of $5,320.00 Upon receipt of the bank statement, Mr. Kellogg arranges his canceled checks in order according to their dates of issuance. He finds checks #7 and #10 missing. These issued checks are outstanding because they have not yet been presented to the bank for payment.

The reconciliation of Mr. Kellogg's Cash account and his bank balance would be as follows:

Cash account, balance per books, February 28, 1958	$5,027.00	Bank balance, per bank statement, February 28, 1958	$5,320.00
		Less	
		Outstanding checks:	
		#7 Feb. 25	$ 62.00
		10 Feb. 28	231.00
			293.00
True cash, February 28, 1958	$5,027.00	True cash, February 28, 1958	$5,027.00

National Bank of Keating

KEATING, NEW YORK

IN ACCOUNT WITH

L. T. Kellogg
412 Pine St.
Keating, N.Y.

CHECKS		DEPOSITS	DATE	BALANCE
BALANCE BROUGHT FORWARD ☛				
		12,000.00	Feb 2 '58	12,000.00 *
		102.00	Feb 4 '58	12,102.00 *
300.00-	1,200.00-		Feb 5 '58	10,602.00 *
		28.00	Feb 9 '58	10,630.00 *
700.00-	5,000.00-		Feb 13 '58	4,930.00 *
		51.00	Feb 16 '58	4,981.00 *
510.00-			Feb 16 '58	4,471.00 *
		389.00	Feb 21 '58	4,860.00 *
116.00-			Feb 21 '58	4,744.00 *
		785.00	Feb 24 '58	5,529.00 *
		991.00	Feb 27 '58	6,520.00 *
1,000.00-	200.00-		Feb 27 '58	5,320.00 *

SC—SERVICE CHARGE FOR PREVIOUS MONTH.
DETAILED ANALYSIS MAY BE SEEN AT THE BANK.

Last Amount in This Column Is Your Balance ⬆

KEY

EC—Error Corrected
CC—Certified Check
CM—Credit Memo.
DM—Debit Memo.
SC—Service Charge
LST—List of Checks

FEB 28 1958

PLEASE EXAMINE AT ONCE. IF NO ERROR IS REPORTED IN TEN DAYS THE ACCOUNT WILL BE CONSIDERED CORRECT

Other factors often influence the reconciliation of the Cash account and the bank balance of a business. Such factors include the following:

1. Certain debits or credits made by the bank in a depositor's account may not have been recorded in the depositor's books of original entry. Some of the items, for example, are these:

DEBITS: Collection and service charges
Printing special checks
Payment of depositor's note (by authority of maker)
Deposited checks returned N.S.F. (i.e., not sufficient funds)

CREDITS: Collections of notes and drafts.

If possible, these debit and credit values should be recorded in the depositor's cash payments and cash receipts books, respectively, for the month covered by the bank statement. After the cash books have been closed and posted, the new balance of the Cash account represents the figure to which the bank balance should be reconciled. If the debits and credits under consideration cannot be entered in the cash books of the month covered by the bank statement—because the cash books have already been closed and posted—they can be recorded as supplemental entries for the month in question. Usually, however, these supplemental values are entered in the cash books of the next succeeding month.

2. Debits made by the depositor against his bank account may not appear on the bank statement. The most common example of this kind of debit is "deposits unrecorded or in transit," i.e., deposits made since the last date shown on the bank statement. When these values *are* actually cash—i.e., coin, currency, good checks, money orders—they should be added to the bank balance when the bank account is being reconciled. These values are cash if there is proof that they have been almost immediately credited to the account of the depositor by the bank and are available for general checking account purposes. When these debit values *are not* actually cash, they should be deducted from the balance of the Cash account when the bank reconciliation schedule is being constructed.

Occasionally, too, a bank may incorrectly debit or credit a depositor's account. When this occurs the bank should be notified immediately and the reported bank balance increased or decreased, as the case may be, by the amount of the error.

ANOTHER ILLUSTRATION The following is an example of the general procedures to be followed in complex cases of bank reconciliations:

John A. Blank

RECONCILIATION OF CASH WITH BALANCE IN FIRST NATIONAL BANK, AUGUST 31, 19__

Cash account, balance per books, August 31, 19__			$ 5,400.00	Bank balance, per bank statement, August 31, 19__			$12,000.00
Add				*Add*			
Proceeds of 60-day bank loan, August 31, 19__			5,000.00	Night deposit, August 31, 19__, credited by bank on September 1, 19__			1,000.00
			$10,400.00				$13,000.00
Less				*Less*			
Bank service charge for August 19__		$ 5.00		Outstanding checks:			
James E. Hine check, August 22, 19__, returned N.S.F.		395.00	400.00	#35	Aug. 29	$1,000.00	
				#41	Aug. 30	1,500.00	
				#49	Aug. 31	500.00	3,000.00
True cash, August 31, 19__			$10,000.00	True cash, August 31, 19__			$10,000.00

The true cash is the amount of cash which should appear on the balance sheet of the business of John A. Blank, August 31, 19__. In short, an effective bank reconciliation works toward the balance sheet value for cash.

In order to bring the balance of the Cash account on the books, $5,400.00, into agreement with the value for cash on the balance sheet, $10,000.00, the following entries should be made on the books of Mr. Blank:

19__			
Aug. 31	Cash	5,000.00	
	Notes Payable		5,000.00
	To record 60-day bank loan, August 31, 19__		
	Miscellaneous Expense	5.00	
	Accounts Receivable (James E. Hine)	395.00	
	Cash		400.00
	To record bank service charge of $5.00 for August 19__; and to charge James E. Hine with his N.S.F. check of August 22, 19__, $395.00.		

Cash Discounts

A cash discount is a special concession granted by a seller to a purchaser for his prompt payment of the seller's invoice. The discount is generally expressed as a percentage of the amount billed by an invoice for merchandise. The cash discount is allowed if the customer makes payment on or before a date fixed or determinable by the terms of the invoice being paid.

Example

The terms on a sales invoice for $1,000.00 are 2/10, n/30 (meaning "2% 10 days, net 30 days"). These terms mean that the invoice can be paid by the customer within 10 days (from the date of the invoice) *less* a cash discount of 2%. The amount of the customer's check would therefore be $980.00.

If not paid within 10 days, the full amount of the invoice is due for payment within 30 days (from the date of the invoice). The amount of the customer's check would therefore be $1,000.00.

Other representative credit terms are

1/10, n/30 (meaning "1% 10 days, net 30 days").
2/10, n/60 (meaning "2% 10 days, net 60 days").
3/5, 2/10, n/60 (meaning "3% 5 days, 2% 10 days, net 60 days").
n/30. A bill with these terms is payable within 30 days of the date of the invoice. There is no cash discount.

Cash discount should always be computed on the amount of a bill less any returns or allowances related to this bill. A cash discount applies

only to merchandise; it does not apply to such invoice items as freight, postage, sales taxes, insurance, and so on. These particular items are payable in full.

Cash discounts relate to cash settlements only. They do not relate to noncash considerations, like a note settlement, unless the payee of the note specifically allows the discount.

It is proper to allow cash discounts on the partial payment of an invoice within the cash discount period. One invoice could be divided into two or more invoices, and one of these invoices could be paid within the discount period with benefit of cash discount. Therefore, if the purchaser of merchandise covered by an invoice for $1,000.00 (terms 2/10, n/30) sends the seller a check for $490.00 within the cash discount period, the credit for partial payment should be $500.00. ($490.00 ÷ 98% = $500.00.) The seller's entry to record the collection would be

Cash	490.00	
Sales Discounts	10.00	
Accounts Receivable		500.00
To record check of $490.00 in partial payment of sales invoice #____, $1,000.00.		

In other words, this entry means that one half of the invoice, $500.00, is settled by a check for $490.00. [$500.00 − (2% × $500.00) = $490.00.]

Trade Discounts

A trade discount is a percentage deduction from the list price of merchandise for some purpose other than that of encouraging the payment of an invoice—less cash discount—on or before a fixed or determinable date. More specifically, trade discounts are used for the purpose of determining prices. Two examples are the following:

1. To reduce list prices to actual prices, i.e., present market prices. (The list price of an item is the price which is listed or quoted by the catalog of the jobber, wholesaler, or manufacturer.) Catalogs of sellers commonly show items at list prices which are seldom, if ever, real selling prices. Real prices are obtained by deducting trade discounts from list prices; and real prices can be changed by varying the percentages of trade discounts.
2. To give favorable or preferential prices to present or prospective customers where price differentials between customers are legally warranted. This is done by varying the trade discounts offered in relation to quoted list prices. (Price differentials may be warranted by the class of customer, for example, wholesaler, restaurant, or institution, or by *quantity* purchases wherein lower prices are justified by reduced or differential costs to the seller.)

If more than one trade discount applies to an item of merchandise, the first discount is applied against the list price, the second discount against the list price reduced by the first trade discount, and so on successively. After all trade discounts have been deducted, the dollar value remaining is the real price at which an item of merchandise will be charged to the account of a customer and cash settlements made. Trade discounts are not entered on the books of a business.

Trade discounts and cash discounts are both illustrated in the following example:

List price of an article		$1,000.00
Less		
Trade discounts of 40%, 10%, and 5% (shown on an invoice as 40-10-5):		
	40% × $1,000.00 =	400.00
		$ 600.00
	10% × $ 600.00 =	60.00
		$ 540.00
	5% × $ 540.00 =	27.00
Net price at which article is billed on invoice		$ 513.00
(*Note:* This net price of $513.00 is the value at which the transaction is ordinarily recorded on the books of both the seller and the buyer.)		
If the terms of the invoice are 2/10, n/30, the cash discount allowed for payment of the invoice within 10 days is	2% × $ 513.00 =	10.26
Amount of check required to pay invoice in full within 10 days of the date of the invoice		$ 502.74

On the statement of income, accounting theory requires that sales discounts should be deducted from sales, and purchases discounts deducted from purchases. Cash discounts are handled in this manner in accord with the following reasons:

1. Sales and purchases should be stated in the statement of income at their cash values or equivalents.
2. The *true effective* price of merchandise is the least amount of cash which will settle a transaction for merchandise. Both seller and buyer look at this net cash price as the real price of the merchandise which is changing hands. The accounting value of a merchandise transaction is therefore the cash equivalent value of that transaction.
3. Income is realized by the sale and not by the purchase of merchandise. Purchases discounts are therefore not income but an offset to Purchases.
4. Sales discounts are not an expense but an offset to Sales. Customers are expected to take their discounts. Further, to label sales discounts as an expense of doing business is tantamount to stating that there is extra expense involved in the handling of accounts receivable which pay promptly as contrasted with those which do not.

Cash discounts are discussed in further detail in Chapter 28.

Freight In

Merchandise may be received by a purchaser on a "freight collect" basis. This means that the purchaser pays the carrier for transportation charges at the time the goods are received. On the other hand, the merchandise may be received "freight prepaid." This means that the seller pays the carrier for the freight charges at the time the goods are shipped.

Sales are billed to customers on one of the following bases for freight:

1. F.o.b. shipping point, freight collect.
2. F.o.b. shipping point, freight prepaid. Freight charges paid by the seller are debited to the account of the buyer.
3. F.o.b. destination, freight prepaid.
4. F.o.b. destination, freight collect. Freight charges paid by the buyer are debited to the account of the seller.

F.o.b. means "free on board." Merchandise shipped "f.o.b. shipping point" means that the purchaser absorbs transportation charges from shipping point to destination. He debits Freight In for freight costs incurred. The purchaser looks upon these transportation bills as directly *increasing the cost* of purchases of merchandise. On the profit-and-loss statement, therefore, the Freight In account is placed in the Cost of Sales section as an addition to the cost of Purchases. Freight applicable to *unsold* merchandise should be added to the cost of the inventory on hand.

Merchandise shipped "f.o.b. destination" means that the seller absorbs transportation charges to destination of shipment. The seller debits Freight Out (a selling expense) for freight costs incurred on sales.

As a general rule it is customary for a purchaser to absorb transportation costs on purchases of merchandise.

When does title pass on shipments made according to the various freight terms described above? This is an important question for accountants. As a general rule it may be stated that under terms of

"F.o.b. shipping point," title passes when the seller delivers the goods to the carrier.[1]

"F.o.b. destination," title passes when goods arrive at destination.[1]

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[1] The following excerpts are taken from the Uniform Sales Act, Section 19:

"Rule 4. (2) Where, in pursuance of a contract to sell, the seller delivers the goods to the buyer, or to a carrier or other bailee (whether named by the buyer or not) for the purpose of transmission to or holding for the buyer, he is presumed to have unconditionally appropriated the goods to the contract, except in the cases provided for in the next rule and in Section 101. This presumption is applicable although by the terms of the contract the buyer is to pay the price before receiving delivery of the goods, and the goods are marked with the words collect on delivery or their equivalent.

"Rule 5. If the contract to sell requires the seller to deliver the goods to the buyer, or at a particular place, or to pay the freight or costs of transportation to the buyer, or to a particular place, the property does not pass until the goods have been delivered to the buyer or reached the place agreed upon."

Trial Balance Errors

A trial balance is a bookkeeping device to prove the balance of the general ledger. Total debit balances must equal total credit balances before the bookkeeper can proceed to the work of preparing statements and closing the books.

Trial balance errors are of five kinds:

1. The original entry for a transaction may be incorrect. The Buildings account, for instance, may have been debited instead of Taxes Expense. Errors of this kind are difficult to detect because, although they are in the trial balance, they do not throw it out of balance. It is very desirable, however, that they be discovered if possible, because they affect the accuracy of the profit and loss statement and the balance sheet. The detection of such errors is the work of a qualified accountant, who must critically analyze the original entries.
2. Errors may result because of incorrect postings:
   a) Posting the wrong amount.
   b) Posting a debit to the credit side of an account, or vice versa.
   c) Posting the same item twice.
   d) Or failure to post at all.
3. Original books of entry may be incorrectly footed.
4. Errors may be the result of incorrectly computing account balances:
   a) Adding the debits.
   b) Adding the credits.
   c) Or taking the difference between the two.
5. Errors may occur in the direct preparation of the trial balance:
   a) Incorrectly recording an account balance in the trial balance.
   b) Placing a debit balance in the credit column or vice versa.
   c) Omitting an account balance.
   d) Incorrectly adding one or both columns of the trial balance.

In practice errors are bound to occur. Obviously the discovery of errors is not made easier by the numerous possible sources of their origin. In this respect the following suggestions may be helpful in tracing errors.

LOCATING ERRORS

1. An error of 1, 10, 100, and so on, is usually due to an error in addition or subtraction.
2. The difference between the two sides of a trial balance may be due to the omission of a debit or credit value.
3. If the difference between the two columns of the trial balance is divisible by 2, look for a figure equal to the quotient which may be
   a) a posting made to the wrong side of an account, or
   b) a debit balance placed in the credit column of the trial balance, or vice versa.
4. If the difference is divisible by 9:
   a) A one-column transposition may be the cause of error.

Correct	*Transposed*	*Difference*	*Quotient*
54	45	9	÷ 9 = 1
67	76	9	÷ 9 = 1
87	78	9	÷ 9 = 1
68	86	18	÷ 9 = 2
75	57	18	÷ 9 = 2
97	79	18	÷ 9 = 2
47	74	27	÷ 9 = 3
85	58	27	÷ 9 = 3
130	103	27	÷ 9 = 3
74,111	47,111	27,000	÷ 9 = 3,000
85,132	58,132	27,000	÷ 9 = 3,000

In the first group, the difference between the digits transposed is 1; in the second group, 2; and in the third group, 3. Each of these quotients represents the difference between the digits which have been transposed. Obviously, if a transposition is suspected in the trial balance, attention should be confined to those adjacent digits in the first and second money columns whose difference is 1, 2, or 3, as the case may be.

In the fourth group of the above example, the three zeros indicate that the three right-hand columns (of the trial balance) are correct. The error is indicated as being localized in the fourth and fifth columns, and the difference between the transposed digits is 3. In searching for the error in the trial balance, attention should be confined to those values of 10,000 and over. Values like 67,132, 86,000, and 19,121 should be disregarded because their differences of 1, 2, and 8, respectively, for the significant figures (in the fourth and fifth columns) do not equal the objective difference of 3. In other words, the search for the error should be centered upon 5-digit values whose fourth- and fifth-column digits have a difference of 3.

b) The error may be due to a slide of one place to the right.

	Difference	*Quotient*
25.00 written as 2.50	22.50	÷ 9 = 2.50

This quotient of 2.50 is the figure incorrectly recorded. If the error in the trial balance is due to a single slide to the right, it is made up of two values: the difference between the trial balance totals and the quotient as derived above. In the instant case the values are 22.50 + 2.50 = 25.00, meaning that 25.00 may have been recorded as 2.50.

5. If the difference is divisible by 99:

a) A two-column transposition may be the cause of error.

Correct	*Transposed*	*Difference*	*Quotient*
514	415	99	÷ 99 = 1
735	537	198	÷ 99 = 2
981	189	792	÷ 99 = 8

The difference between the digits transposed is 1, 2, and 8, respectively. In the search for the error, attention should be confined to digits in the first and third columns whose differences are 1, 2, and 8, as the case may be.

b) The error may be due to a slide of two places to the right.

	Difference	*Quotient*
250.00 written as 2.50	247.50	÷ 99 = 2.50

This quotient of 2.50 is the figure incorrectly recorded. If the error in the trial balance is due to a single slide to the right, it is made up of two values: the difference in the trial balance totals and the quotient as derived above. In the instant case the values are 247.50 + 2.50 = 250.00, meaning that 250.00 may have been recorded as 2.50.

This type of error is common because of the tendency to think of, or call, $250.00 as "two-fifty" and then to write $2.50.

6. If the difference is divisible by 999;

a) A three-column transposition may be the cause of error.

Correct	*Transposed*	*Difference*	*Quotient*
5,006	6,005	999	÷ 999 = 1

The difference between the digits transposed is 1. In searching for the error in the trial balance, attention should be confined to digits in the first and fourth columns whose difference is 1.

b) The error may be due to a slide of three places to the right.

	Difference	*Quotient*
2,500.00 written as 2.50	2,497.50	÷ 999 = 2.50

Again, the quotient is the figure incorrectly recorded in the trial balance.

SUMMARY These special suggestions for locating trial balance errors have been limited to those which have some promise of practicable serviceability. If these suggestions are not helpful in discovering the errors in a specific trial balance, the only recourse is to check the bookkeeping work of the accounting period systematically—footings of books of original entry, postings, determination of account balances, the recording of account balances in the trial balance, and footings of the trial balance.

Trial balance difficulties show how important it is for the bookkeeping work of a business to be accurately performed. The rewards of bookkeeping work well done are obvious: (1) the usefulness of the bookkeeping records is increased; (2) encouragement is given to the prompt preparation of financial statements; (3) time and energy are saved. To these should be added the favorable atmosphere of steady accomplishment.

The Statement of Income

As our study of accounting progresses, it is necessary to center an increasing amount of attention upon the statement of income. It is accord-

ingly appropriate, at this point, to pause briefly in order to re-emphasize (see also page 59) the importance of certain values of the statement of income—values of significant usefulness to management, investors, and others.

The prime function of the statement of income is to show the net income (or net loss) of a business over a specified period of time, and to show how or why that income was earned. If this function is to be responsibly discharged, the statement of income must be organized so that it shows certain major types of information.

Net sales. The difference between gross sales and sales returns and allowances is net sales—in terms of the invoice price of merchandise sold to customers during an accounting period. By deducting sales discounts, the remainder will be net sales in terms of the minimum amount of cash required to pay for these sales. By the standard of expected cash settlements, the net sales of a business represents the actual volume of business transacted in an accounting period, i.e., sales *less* returned sales and allowances and *less* sales discounts. This value is the revenue from sales before deducting any of the costs of producing this revenue.

Cost of sales. The cost of sales is the cost of the merchandise sold during an accounting period. Cost of sales is comprised of

	the inventory of merchandise at the beginning of the period
plus	purchases (net),
minus	purchases discounts,
plus	transportation costs incurred on purchases, and
minus	the inventory of merchandise at the end of the period.

Transportation charges are included in cost of sales because they represent an increase in the cost of purchased merchandise. On the statement of income, therefore, Freight In is added to Purchases in order to show the full cost of all merchandise purchased during the accounting period (see illustration, page 200). By analogous reasoning, the cost of an inventory is the net invoice cost of the merchandise on hand plus transportation charges incurred in the purchase of this merchandise.

(When the books of a business are being closed, the Freight In and Purchases Discounts accounts are both closed to the Cost of Sales account.)

Insurance paid on merchandise is usually looked upon as an operating expense rather than as an addition to the purchase cost of goods.

Gross Profit. Gross profit is the difference between net sales and cost of sales.

Operating Expenses. Operating expenses, generally divided into selling expenses and general expenses, are those incurred in the production of the main income stream of a business.

Net Profit from Operations. The net profit from operations is the difference between gross profit and total operating expenses. It represents the

amount of operating profit realized from the main function for which a business was organized as, for example, merchandising.

Other Income. Under this heading appear those incomes realized more or less regularly from sources other than merchandising. Examples of other income are dividend income, interest income, and rent income.

Other Expense. Under this heading appear those expenses incurred more or less regularly as nonoperating costs. These particular expenses are not costs directly associated with the production of the gross profit of a business. Examples of other expense are interest expense and taxes expense on idle property.

Special Income Credits and Special Income Debits. Under these two headings are placed the uncommon, extraordinary, or abnormal items of profit or loss of a business. Examples of special income credits are profits realized on the sale of marketable securities, land, or other properties, and collections realized on accounts or notes receivable previously written off as worthless. Examples of special income debits are losses incurred on the sale of marketable securities, land, or other properties, additional income taxes for prior years, and losses from fire, storm, or flood.

Net Income. This value is the net income realized from *all* of the transactions of a business over an accounting period.

Commentary on Net Income

The net income of a business for an accounting period may be defined as follows: *The net income earned by a business over a specified period of time is the excess of all profit and loss credit values over all profit and loss debit values of the business for the period.*

Alternatively, net income may be defined thus: *The net income earned by a business over a specified period of time is the excess of net worth at the end of the period over the net worth at the beginning of the period excluding, however, any increases in realized net worth derived from investments or donations of capital, and excluding any distributions of earned or invested net worth.*

A statement of income, for any given business, which includes all the profit and loss transactions of that business for an accounting period is called the "all-inclusive" type of income statement.

Illustration

Besides being an example of an "all-inclusive" statement of income, the following illustration points up the correct placement of information on this statement.

John A. Blank, Inc.

STATEMENT OF INCOME FOR THE YEAR ENDED DECEMBER 31, 19__

Sales, less Returned Sales and Allowances ($14,000.00)			$446,000.00
Less Sales Discounts			6,000.00
			$440,000.00
Cost of Sales:			
Inventory, December 31, 19__		$100,000.00	
Purchases, less Returned Purchases and Allowances ($8,000.00)	$203,000.00		
Less Purchases Discounts	3,000.00	200,000.00	
Freight In		10,000.00	
		$310,000.00	
Inventory, December 31, 19__		130,000.00	180,000.00
Gross Profit			$260,000.00
Selling Expenses:			
Advertising Expense		$ 14,000.00	
Sales Salaries		50,000.00	
Traveling Expenses		20,000.00	
		$ 84,000.00	
General Expenses:			
General Salaries	$ 66,000.00		
Miscellaneous Expense	25,000.00		
Payroll Taxes	5,000.00		
Rent Expense	20,000.00		
Utilities Expense	10,000.00	126,000.00	210,000.00
Net Profit from Operations			$ 50,000.00
Other Income:			
Interest Income			12,000.00
			$ 62,000.00
Other Expense:			
Interest Expense			2,000.00
			$ 60,000.00
Special Income Credits:			
Profit on Sale of Land			20,000.00
			$ 80,000.00
Special Income Debits:			
Contribution—Civic Center Memorial Fund		$ 10,000.00	
Loss Sustained from Tornado		15,000.00	25,000.00
Net Income before Income Taxes			$ 55,000.00
Provision for Income Taxes			23,000.00
Net Income			$ 32,000.00

PROBLEMS

Problem 10–1. X received the following quotations on the same article of merchandise:

From Y: $20.00 per unit, less 40%, 10%, and 5%.
Cash discount, 2%.
From Z: $20.00 per unit, less 50%, and 5%.
Cash discount, 1%.

X accepted the better offer, purchasing 100 units, f.o.b. destination. The freight, which the shipper failed to prepay, was paid by X and amounted to $40.50. X paid for the merchandise within the discount period, deducting the freight of $40.50 in making his remittance.

What are the proper entries to record X's transactions?

Problem 10–2. J. W. Crain owes Martin & Son $614.76 for merchandise purchased August 1 on terms of 3/10, 1/20, n/60. On August 10 Mr. Crain writes a check for $500.00 in favor of Martin & Son in part payment of account. What entry should Mr. Crain make?

Problem 10–3. X, in Chicago, buys merchandise from Y, in New York, for $733.00 less discounts of 30-10-5. Terms 2/10, n/60, f.o.b. Chicago. X pays freight of $10.00. X returns unsatisfactory merchandise, receiving a credit memorandum of $38.70 therefor.

X pays the bill within the cash discount period, taking all deductions to which he is entitled. What is the amount of his check? What entry should be made to record the disbursement?

Problem 10–4. On March 1, 19__, John A. Adams purchased merchandise from Brent & Co. in Chicago for $1,060.00, less discounts of 30-10-10. Terms, f.o.b. destination, and 3/10, n/60. Mr. Adams paid freight of $13.16. On March 7 he received a credit memorandum for goods returned, $30.00. On March 10. Mr. Adams sent a check to Brent & Co. for $346.73, after taking all deductions to which he was entitled. On April 30 he remitted for the balance due.

What entries should be made by Mr. Adams on March 10 and April 30?

Problem 10–5. The following transactions occurred on the dates indicated:

October

1 J. L. Dunn purchased merchandise from Perry & Son for $1,000.00 less discounts of 30-10-10. Terms f.o.b. shipping point, and 3/10, n/30.
2 Dunn paid freight of $17.00 when the merchandise arrived.
7 On this date Mr. Dunn received a credit memorandum from Perry & Son for $50.00, covering merchandise returned.
10 Dunn mailed a check of $307.49 to Perry & Son.
31 Dunn mailed a check to Perry & Son for the balance due.

What entries should be made on October 10 and 31?

Problem 10–6. On a certain quantity of small electric drills which he was expecting to purchase, Mr. Whiting, president and manager of the Whiting Hardware Company, received the following quotations and then entered into the transactions indicated.

October

		List	*Discounts*
1	Quotations from		
	Gray & Company	$1,000.00	40-10-10
	Allen & Son	1,200.00	50-20

The purchase of drills was made on the basis of the better price offered.

3 Received the merchandise and invoice (dated October 1). The purchase invoice showed freight terms of f.o.b. destination; and cash discount terms of 3/5, 2/10, n/60. It also showed an extra charge for insurance of $1.27, which was correct.

Paid the New York Central Railroad for freight on this merchandise, $19.70.

5 Mailed a check of $300.00 (representing $319.70 less freight of $19.70) in part payment of account. The recording of this check took into consideration a proper allowance for cash discount.

11 Mailed a check for $100.00. The recording of this check took into consideration a proper allowance for cash discount of 2%.

November

30 Mailed a check for the balance required to settle the vendor's account.

Required

What entries should be made to record the above transactions? Show the date of each entry.

Problem 10–7. The following information relates to the cash account and the bank account of the Keller Sales Company, August 31, 19__:

Bank balance, August 31, 19__, per bank statement . . .		$13,246.00
Cash account balance, August 31, 19__, per general ledger . .		14,862.00
Collection and exchange charged by bank during August . .		6.84
Checks outstanding on August 31 (not yet charged against company's bank account)	2,314.00	
Cash in the office recorded in the cash receipts book of August 31 but deposited in the bank on September 1	817.00	
Securities purchased by the bank, cost of the securities being debited to the bank account of the Keller Sales Company. A debit memorandum for this purchase accompanied the canceled checks returned by the bank with its statement of August 31	3,106.16	

Required

1. Prepare a reconciliation of the bank account, August 31, 19__.
2. What entries arising from the reconciliation of the bank account should be placed on the books of the Keller Sales Company?

Problem 10–8. On October 31, 19__, Clyde L. Farrar began the reconciliation of his bank account with the following information:

Bank balance, October 31, 19__, per bank statement	$12,076.10
Cash account balance, October 31, 19__, per general ledger	5,977.69
Checks outstanding, October 31, 19__	2,025.22
Deposit made October 31 but not appearing on the October bank statement	812.16
Included with the canceled checks returned by the bank is one check for $114.65 signed by Clark L. Farrar. This check was improperly charged against the bank account of Clyde L. Farrar.	
The bank statement showed a deposit-credit of $5,000.00 on October 17. This credit represented a loan procured from the bank on October 17 on a note payable of $5,000.00 for 60 days (with running interest at 6%). This loan has not been recorded on the books of Mr. Farrar.	

Required

1. Prepare a reconciliation of the bank account.
2. What entries, arising from the reconciliation schedule, should be placed on the books of Clyde L. Farrar? Set up these entries in "journal entry" form.

Problem 10–9. From the following information prepare the bank reconciliation of Leonard A. Adams on March 31, 19__:

Cash, March 31, 19__, per books	$ 8,021.00
Bank balance, March 31, 19__, per bank statement	10,176.00
Cash received and recorded on the afternoon of March 31 but deposited on April 1	314.00
Proceeds of bank's sale of U. S. government bonds owned by Leonard A. Adams. This sale, appearing on the bank statement, has not been recorded on the books of Mr. Adams. (The cost of the securities sold was $2,000.00.)	2,132.00
Bank service charge for the month of February	7.00
The following checks were outstanding March 31, 19__:	

#16 January 29	Roy E. Burke	$ 76.00	
#31 February 28	Paul A. Goff	122.00	
#84 March 30	Carl J. Deisler	200.00	
			398.00

The bank statement included a debit for $71.00 which, upon examination, was found to be Mr. Adam's check #40 improperly recorded on his books at $17.00 (and debited to Auto Repairs Expense). The bank statement was correct in all its detail.

Required

What entries should be placed on the books of Mr. Adams?

Problem 10–10. L. M. Roberts commenced business on June 2, 19__. His cash books for the month of June were as follows:

CASH RECEIPTS BOOK

June	2	Investment	10,000.00
	5		202.00
	11		128.00
	16		57.00
	21		389.00
	23		486.00
	24		200.00
	27		50.00
	28		878.00
			244.00
	30		310.00
			12,944.00

CASH PAYMENTS BOOK

		Check No.	
June	3	1	301.00
		2	1,214.00
	10	3	710.00
	12	4	2,344.00
	14	5	2,510.00
	19	6	261.00
	20	7	162.00
	25	8	17.00
	26	9	204.00
	27	10	1,000.00
	29	11	220.00
			8,943.00

His bank statement for the month of June showed these items:

FIRST NATIONAL BANK

19__		*Charges*	*Deposits*	*Balance*
June	2		10,000.00	10,000.00
	5	301.00	202.00	9,901.00
	7	1,214.00		8,687.00
	11		128.00	8,815.00
	15	2,344.00		6,471.00
	17		57.00	6,528.00
	18	710.00		5,818.00
	19	261.00		5,557.00
	22		389.00	5,946.00
	25	2,510.00	686.00	4,122.00
	27	162.00	50.00	
		1,000.00		3,010.00
	29		1,122.00	4,132.00
	30	50.00		4,082.00

Required

1. Prepare a reconciliation of the bank account. The charge of $50.00 in the bank statement covers an "N.S.F." check, i.e., a check deposited by Mr. Roberts which the bank was unable to collect. The check was signed by a customer, E. A. Atlee. Mr. Roberts expects that the check will be collected during July.

2. What entries arising from the reconciliation of the bank account should be placed on the books of Mr. Roberts?

Problem 10–11. On October 31, 19__, W. C. Willard reconciled his bank account as follows:

Balance, October 31, 19__, per bank statement		$841.22
Less Outstanding checks:		
Oct. 2	$ 2.00	
25	3.15	
29	37.20	
31	7.85	50.20
Balance, October 31, 19__, per Cash account		$791.02

Mr. Willard's cash books and bank statement for the month of November follow.

CASH RECEIPTS BOOK

Nov. 3		207.12
4		106.25
6		297.36
7		75.00
8		101.09
10		191.41
30		99.00
		1,077.23

CASH PAYMENTS BOOK

Nov. 1		6.53
		45.15
		2.91
		8.74
2		6.12
		2.30
		11.89
		7.21
5		2.75
10		25.00
14		6.01
17		3.00
19		3.80
21		6.77
28		26.23
		164.41

BANK STATEMENT

		Charges	*Deposits*	*Balance*
Nov.	1			841.22
	1	37.20		804.02
	4	45.15		758.87
	5	3.15	313.37	1,069.09
	5	7.21		1,061.88
	7	2.91	297.36	1,356.83
	9	6.12		1,350.21
	9	6.53		1,343.68
	9	8.74		1,334.94
	9	7.85		1,327.09
	9	2.30	176.09	1,500.88
	12	50.00		1,450.88
	12	2.00	191.41	1,640.29
	15	6.01		1,634.28
	23	6.77		1,627.51
	29	11.89		1,615.62
	30	2.75		1,612.87

Required

1. Prepare a reconciliation of the bank account, November 30, 19__. The $50.00 charge in the bank statement is a counter check drawn by Mr. Willard on November 12 when he needed some cash in a hurry.
2. What entries, arising from the reconciliation of the bank account, should be placed on the books of Mr. Willard?

Problem 10–12. On February 28, 19__, L. T. Hurley reconciled his bank account as follows:

Bank balance, February 28, 19__, as per bank statement		$5,320.00
Less Outstanding checks:		
#207	$ 62.00	
210	231.00	293.00
Cash, February 28, 19__, balance per books		$5,027.00

Mr. Hurley's cash receipts book, cash payments book, and bank statement for the month of March, 19__, were as follows:

CASH RECEIPTS BOOK

19—		
Mar	2	87.00
	5	210.00
	10	599.00
		722.00
		617.00
	15	500.00
	19	72.00
	24	500.00
		110.00
	28	1,311.00
		4,728.00

CASH PAYMENTS BOOK

19—		*Check No.*	
Mar.	1	211	300.00
	2	212	50.00
	4	213	200.00
	6	214	75.00
	8	215	20.00
	10	216	408.00
		217	2,330.00
		218	1,800.00
	12	219	200.00
	15	220	150.00
	16	221	300.00
	19	222	1.50
	22	223	30.00
	24	224	200.00
	26	225	807.00
	31	226	120.00
			6,991.50

FIRST MANHATTAN BANK

19—		*Charges*			*Deposits*	*Balance*
Mar.	1					5,320.00
	1	231.00				5,089.00
	2				87.00	5,176.00
	2	300.00				4,876.00
	5				210.00	5,086.00
	5	200.00	50.00			4,836.00
	8	62.00				4,774.00
	10				1,938.00	6,712.00
	10	3.00				6,709.00
	12	408.00	75.00	2,330.00		3,896.00
	15				500.00	4,396.00
	15	200.00	1,800.00			2,396.00
	17	150.00	300.00			1,946.00
	19				72.00	2,018.00
	24				610.00	2,628.00
	24	150.00				2,478.00
	28				1,311.00	3,789.00
	28	807.00				2,982.00

Included with the canceled checks returned by the bank was a debit memorandum, dated March 10, 19__, for $3.00 covering a charge for special checks furnished to Mr. Hurley by the bank. All other debits appearing in the bank statement were for checks and were correct as charged, including check #222 for $150.00. No checks were issued by Mr. Hurley during March other than checks #211–226, inclusive.

Required

1. Prepare a reconciliation of the bank account, March 31, 19__.
2. What entries, arising from the reconciliation of the bank account, should be placed on the books of Mr. Hurley?

Problem 10–13. On January 11, 1958, the accounts of Harris & Barnes were being audited by a firm of public accountants. One of the auditors

assembled the following information preparatory to a reconciliation of the bank account with cash:

		Check No.	*Cash Receipts Book*	*Cash Payments Book*	BANK STATEMENT *Charges*	*Deposits*	*Balance*
1957							
Dec. 31	Balance		3,620.00				3,474.00
1958							
Jan. 2			800.00			640.00	4,114.00
		1		212.00			
		2		20.00	290.00		3,824.00
3			614.00			800.00	4,624.00
		3		87.00			
		4		90.00	212.00		4,412.00
4			300.00			614.00	5,026.00
		5		140.00			
		6		10.00			
5			710.00			300.00	5,326.00
		7		300.00	140.00		
					180.00		
					20.00		4,986.00
6			1,200.00			710.00	5,696.00
		8		62.00			
		9		404.00	78.00		5,618.00
7			313.00			1,200.00	6,818.00
		10		100.00	10.00		
					404.00		6,404.00
9			950.00			313.00	6,717.00
		11		162.00	7.00		6,710.00
10			2,200.00			950.00	7,660.00
		12		480.00	300.00		
		13		1,600.00	24.00		7,336.00
		14		844.00			
		15		98.00			
10	Balance			6,098.00			
			10,707.00	10,707.00			
Jan. 11	Balance		6,098.00				

The detailed debits and credits of the bank statement have been checked and found correct. The $7.00 charge on January 9 was for bank service charges, collection and exchange fees, and the like. All other charges are represented by canceled checks. Each bank deposit represented the firm's total cash receipts of the preceding business day.

Three checks, one for $24.00, one for $180.00, and one for $290.00, were outstanding in the bank reconciliation of December 31, 1957.

Required

1. Prepare a reconciliation of the bank account, January 10, 1958. The canceled check for $78.00, on examination, was found to be check #3 of January 3, 1958. It was improperly recorded in the cash payments book as $87.00.

2. What entries, arising from the reconciliation of the bank account, should be made?

Chapter 11

NEGOTIABLE INSTRUMENTS: PROMISSORY NOTES AND DRAFTS

Definitions

A negotiable instrument is one whose ownership can be transferred by delivery or, alternatively, by endorsement (where required) and delivery. The most common types of negotiable instruments are promissory notes and bills of exchange (or drafts).

A promissory note is defined by the Uniform Negotiable Instruments Act as follows:

> A negotiable promissory note within the meaning of this act is an unconditional promise in writing made by one person to another, signed by the maker, engaging to pay on demand or at a fixed or determinable future time a sum certain in money to order or bearer.

Example

July 31, 1958 Chicago, Illinois $1,000.00

Sixty days After Date I Promise to Pay to the Order of

Henry E. Field

One Thousand and No/100 - - - - - - - - - - DOLLARS

For value received, with interest from date at the rate of 6 % per annum payable at First National Bank of Chicago, Illinois

Irving J. Bush

This promissory note is a *note receivable* to Henry E. Field and a *note payable* to Irving J. Bush.

Bills of exchange or drafts are defined and illustrated on page 224.

Why Promissory Notes Are Used

Promissory notes are used for the following reasons:

1. They represent a written acknowledgment of a debt by a debtor. A note receivable is better evidence of a debt than an open account receivable.
2. They are often used by businesses which sell merchandise on long-term credit or installment plans of payment. Dealers in furniture, automobiles, and farm machinery, for example, commonly secure notes from their customers.
3. The holder of a note receivable can usually obtain funds in advance of the maturity of a note by discounting the note with (i.e., by selling the note to) a bank or other party. As a general rule it is easier to raise money by transferring rights in notes receivable than in open accounts receivable.
4. They are sometimes used when longer-than-normal credit terms are arranged by a buyer and seller.
5. They often earn interest.

Characteristics of a Promissory Note

The essential characteristics of a promissory note are these:

1. It must be in writing.
2. It must contain an unconditional promise to pay.
3. It must be for a definite amount.
4. It must be made out "to the order of."
5. It must have a definite due date.
6. It must be signed by the maker in favor of the payee.

Endorsements

The ownership of a promissory note is transferred by

1. *delivery* when the instrument is payable to bearer.
2. *endorsement* in all other cases.

Endorsements may be classified as follows:

1. *Unqualified:* *Henry E. Field* (signature)

   or

   Pay to the order of
   Wilson F. Manning
   Henry E. Field (signature)

2. *Restrictive:* Pay to the order of
   Wilson F. Manning only
   Henry E. Field (signature)

or

Pay to the order of the First
National Bank for collection.
Henry E. Field (signature)

A restrictive endorsement prevents further transfer of title to a note or makes the endorsee an agent of the endorser.

3. *Qualified:* Pay to the order of Wilson F.
Manning without recourse
Henry E. Field (signature)

The endorser warrants that he has title to a genuine instrument. The words "without recourse" mean that the endorser (Henry E. Field) is not liable for payment should the note not be paid at its maturity date by the maker or other endorser.

It is well for the maker to state on the back of a promissory note or check (in the space above the first endorsement) exactly what is being paid. Endorsement of the instrument then constitutes legal acknowledgment by the payee that the item or items enumerated by the maker are paid.

Presentment for Payment

When a promissory note falls due it should be presented to the drawee for payment. If the note specifies a certain bank as the place of payment, the bank will usually pay the note on presentation and charge the amount of the payment to the account of the drawee.

Presentment is necessary in order to hold the endorsers of a note liable for its payment. In the event that a note is not paid when due, the holder of a note should immediately notify endorsers of this fact; failure to do so will have the effect of releasing endorsers from their liability for payment. If the holder and endorser reside in the same place, notice of dishonor must reach the endorser by the next business day after dishonor. If the endorser lives in a place different from that of the holder, notice of dishonor must be in the mail by the next business day following dishonor.[1]

[1] The Uniform Negotiable Instruments Act provides:
"Where the parties reside in the same place, notice must be given within the following times:
(1) If given at the place of business of the person to receive notice, it must be given before the close of the business hours of the day following.
(2) If given at his residence, it must be given before the usual hour of rest on the day following.
(3) If sent by mail, it must be deposited in the post office in time to reach him in the usual course on the day following.
"Where the parties reside in different places:
(1) If sent by mail, it must be deposited in the post office in time to go by mail the day following the day of dishonor or, if there be no mail at a convenient hour on that day, by the next mail thereafter.
(2) If given otherwise than through the post office, then within the time that notice would have been received in due course of mail, if it had been deposited in the post office within the time specified in the last subdivision."

Notice of nonpayment may be rendered formally by filing a "notice of protest." This procedure is as follows:

1. A written statement is made by the holder of the note that the instrument is due and has not been paid.
2. The notary public attempts collection of the note. Upon his failure to do so he writes "protested" across the face of the note, with notation as to date, and reason for protest.
3. Notices of protest are sent to the maker of the note and to each endorser.

The expenses of protesting a note are known as protest fees.

Due Date of a Promissory Note

A note may fall due

1. on demand,
2. upon a specified date,
3. after a certain period of time:
   a) "Sixty days after date (July 31)"
      August . . . . 31 days
      September . . . 29 days
      60 days
      Due date: 60 days after July 31, or September 29.
   b) "Two months after date (July 25)"
      Due date: September 25.
      "Two months after date (July 31)"
      Due date: September 30.
      This particular due date is explained by the fact that an instrument, dated on the 31st and due X months after date, is due on the last day of the month in which it matures.
   c) "One year after date (July 31, 1958)"
      Due date: July 31, 1959.

Thus, if the term of a note is given in days, count the number of days from the date of the note to find the due date. If the term of the note is given in months, from the date of the note to the corresponding date of the next month is one month, to the corresponding date of the second month is two months, to the corresponding date of the third month is three months, and so on.

The Uniform Negotiable Instruments Act, Section 85, provides: "Every negotiable instrument is payable at the time fixed therein without grace. When the day of maturity falls upon Sunday, or a holiday, the instrument is payable on the next succeeding business day. Instruments falling due on Saturday are to be presented for payment on the next business day, except that instruments payable on demand may, at the option of the holder, be presented for payment before twelve o'clock noon on Saturday when that entire day is not a holiday."

Interest

Interest may be defined as a payment made for the use of money. It is better, however, to define interest as the increase of an indebtedness which occurs because of the passage of a period of time.

As a general rule note transactions involve interest. Some notes are "with interest" and some are "without interest." If the cash repayment, or total of cash payments, made by the maker of a note is more than the amount of cash originally received by him, the difference is interest.

Notes may be issued without cash consideration. A note may be issued—with or without interest—in settlement of the balance of an account or as the immediate means of settlement of a merchandise transaction. In this latter respect trade acceptances do not generally carry interest.

Interest is commonly computed upon the basis of a 360-day year (12 months of 30 days each).

The period for which interest is computed varies. For instance, if a note is payable "two months after date (July 31)"

1. a bank will compute interest for the exact number of days elapsed, i.e., 61 days, whereas
2. business practice is to compute the interest for two months (60 days).

Interest Calculations

Problem: Find the interest on $1,000.00 for 60 days at 6%.
Solution: 6/100 × $1,000.00 × 60/360 = $10.00

Problem: Find the interest on $1,000.00 for 6 days at 6%.
Solution: 6/100 × $1,000.00 × 6/360 = $1.00

The same results may be obtained by taking the principal figures and pointing off 2 places to the left and 3 places to the left, respectively.

This coincidence introduces the well-known "6% rule" for the computation of interest:

1. To find the interest on a sum of money for 60 days, at 6%, point off 2 places to the left.
2. To find the interest on a sum of money for 6 days, at 6%, point off 3 places to the left.

Examples

Problem: Find the interest on $1,724.87 for 60 days at 6%.
Answer (pointing off 2 places): = $17.25

Problem: Find the interest on $1,724.87 for 6 days at 6%.
Answer (pointing off 3 places): = $1.72

Problems

Find the interest at 6% on \$615.23 for 6 days . . . . . = \$0.62

11 days	2 × \$0.61523 =	\$1.23046	=	12 days	
		−0.10254	=	− 1 day	
					= \$1.13
18 days . . .	3 × \$0.61523				= \$1.85
30 days . . .	1/2 × \$6.1523				= \$3.08
45 days . . .	1/2 × \$6.1523 =	\$3.076	=	30 days	
		1.538	=	15 days	
					= \$4.61
46 days . . .	1/2 × \$6.1523 =	\$3.0761	=	30 days	
		1.5381	=	15 days	
	1/6 × \$0.61523 =	0.1025	=	1 day	
					= \$4.72
54 days		\$6.1523	=	60 days	
		−0.6152	=	− 6 days	
					= \$5.54
3 months		\$6.1523	=	2 months	
		3.0761	=	1 month	
					= \$9.23

If the interest rate is 7%, these answers should be increased by 1/6; if the interest rate is 5%, they should be decreased by 1/6. Other rates may be obtained by similar computations.

If it is desired to compute the interest upon the basis of a 365-day year, the answers should be decreased by 1/73. In other words, to obtain the interest on a sum of money on a 365-day basis, compute the interest on a 360-day basis, then deduct 1/73 (because 1/360 is 73/72 of 1/365).

ACCOUNTING FOR NOTES RECEIVABLE

The following note will be used as the base for the illustrative discussion of this section.

Due _____ New York, N.Y., March 1, 1958. \$1,000.00

Four months after date, I promise to pay to the order of _____

William E. Trent at Royal State Bank

One Thousand and no/100 Dollars.

For value received. Lloyd J. Martin

The entries to be made on the books of William E. Trent in connection with this note, as illustrated below, will embrace several of the accounting problems encountered in recording notes receivable. Parallel columns are used, one to show the entries on the assumption that the note is "without interest," and the other to show the entries on the assumption that the note is "with interest at 6%." Entries involving cash are, of course, to be made in the cash receipts book, all others in the journal. For convenience, however, all entries have been prepared in journal entry form.

The Note Is Received

On March 1, 1958, William E. Trent receives a note from Lloyd J. Martin for $1,000.00, due in four months.

	Without Interest				*With Interest at 6%*		
Mar. 1	Notes Receivable	1,000.00		Mar. 1	Notes Receivable	1,000.00	
	Lloyd J. Martin		1,000.00		Lloyd J. Martin		1,000.00
	To record receipt of 4-month note, dated today.				To record receipt of 4-month note, dated today, with interest at 6%.		

In lieu of an interest-bearing note, Mr. Martin might have given his note for $1,020.00, the face of the note including $20.00 interest to maturity. This, of course, would not have carried running interest. Mr. Trent would make the following entry on receipt of this note:

Mar. 1	Notes Receivable	1,020.00	
	Interest Income		20.00
	Lloyd J. Martin		1,000.00
	To record receipt of 4-month note, dated today, interest of $20.00 included in face of note.		

When the note is collected in cash, the entry would be:

July 1	Cash	1,020.00	
	Notes Receivable		1,020.00
	To record payment of Lloyd J. Martin note of March 1, 1958.		

Notes receivable, whether interest-bearing or not, are always recorded on the books at face value. This bookkeeping means, of course, that note instruments are valued on two valuation bases: interest-bearing notes are valued at present value and noninterest-bearing notes are valued at maturity value.

The Note Is Paid at Maturity

On July 1, 1958, Lloyd J. Martin pays his note of March 1, 1958, in full.

Without Interest

July 1	Cash	1,000.00	
	Notes Receivable.		1,000.00
	To record payment of Lloyd J. Martin note of March 1, 1958.		

With Interest at 6%

July 1	Cash	1,020.00	
	Notes Receivable		1,000.00
	Interest Income.		20.00
	To record payment of Lloyd J. Martin note of March 1, 1958, with interest at 6%.		

The Note Is Dishonored at Maturity

On July 1, 1958, Lloyd J. Martin refused payment on his four-month note to William E. Trent, dated March 1, 1958.

Without Interest

July 1	Lloyd J. Martin . .	1,000.00	
	Notes Receivable.		1,000.00
	To charge account of Lloyd J. Martin with dishonored note.		

With Interest at 6%

July 1	Lloyd J. Martin . .	1,020.00	
	Notes Receivable		1,000.00
	Interest Income.		20.00
	To charge account of Lloyd J. Martin with dishonored note and interest.		

The dishonored note is debited to Martin's personal account for the reason that his account should show the fact of dishonor. The debit in Martin's account for the dishonored note is a valuable bit of credit information.

The Note Is Partly Paid at Maturity

On July 1, 1958, Lloyd J. Martin paid $450.00 on his four-month note to William E. Trent, dated March 1, 1958, and gave a new sixty-day note for the balance.

Without Interest

July 1	Cash	450.00	
	Notes Receivable .		450.00
	To record part payment of Lloyd J. Martin's note of March 1, 1958.		
July 1	Lloyd J. Martin . . .	550.00	
	Notes Receivable .		550.00
	To charge account of Lloyd J. Martin with unpaid portion of his note of March 1, 1958.		
July 1	Notes Receivable . .	550.00	
	Lloyd J. Martin . .		550.00
	To record receipt of new 60-day renewal note.		

With Interest at 6%

July 1	Cash	470.00	
	Interest Income .		20.00
	Notes Receivable .		450.00
	To record part payment of Lloyd J. Martin's note of March 1, 1958, and 6% interest in full to date.		
July 1	Lloyd J. Martin . .	550.00	
	Notes Receivable .		550.00
	To charge account of Lloyd J. Martin with unpaid portion of his note of March 1, 1958.		
July 1	Notes Receivable . .	550.00	
	Lloyd J. Martin .		550.00
	To record receipt of new 60-day renewal note with interest at 6%		

By the above accounting it is not to be inferred that Martin's status, at any time, reverts to that of an open account debtor. The unpaid balance on the first note is run through Martin's account for the reason that his

account should show, as a matter of credit information, the added time required by Martin to settle his indebtedness.

The Note Is Discounted

On April 26, 1958, William E. Trent endorses the note of Lloyd J. Martin and discounts it at the bank, receiving cash.

	Without Interest				*With Interest at 6%*			
April 26	Cash	989.00		April 26	Cash	1,008.78	
	Interest Expense	11.00			Interest Income		8.78
	Notes Receivable Discounted		1,000.00		Notes Receivable Discounted		1,000.00
	To record note of Lloyd J. Martin, discounted today.				To record note of Lloyd J. Martin, discounted today.		

The cash received on these notes is computed as follows:

Value of note at maturity	$1,000.00	Value of note at maturity	$1,020.00
Less discount (interest)[2] on maturity value of note for 66 days (April 26 to July 1)	11.00	*Less* discount (interest)[2] on maturity value of note for 66 days (April 26 to July 1)	11.22
Cash proceeds of note	$ 989.00	Cash proceeds of note	$1,008.78

In the event that a note is not paid at maturity any endorser can be held liable for its payment. This contingent liability is recognized in the entries above by the crediting of a new account called Notes Receivable Discounted.

The two entries above are recorded in the cash receipts book as follows:

CASH RECEIPTS BOOK

DATE		ACCOUNT CREDITED	EXPLANATION	L.F.	CREDIT *Miscellaneous*	CREDIT *Accounts Receivable*	DEBIT *Sales Discounts*	DEBIT *Cash*
1958								
Apr.	26	Notes Rec. Disctd.	L. J. Martin note Mar. 1		1,000.00			
		Interest Expense	66 days' discount		(11.00)			989.00
	26	Notes Rec. Disctd.	L. J. Martin note Mar. 1		1,000.00			
		Interest Income			8.78			1,008.78

The item in parentheses indicates a debit entry.

With respect to the noninterest-bearing note in this illustration, the difference between the face value of the note and the amount of cash received is Interest Expense, $11.00. With respect to the interest-bearing

[2] The discount rate is the bank's interest rate. In the examples above, the bank rate is assumed to be 6%.

note, the difference between the cash received and the face value of the note is Interest Income, $8.78.

It would be possible, when an interest-bearing note receivable is discounted, to journalize the transaction so as to recognize the interest-income earned on the note and the discount expense charged by the bank. It is general business practice, however, to offset the interest income against the discount expense; the difference is simply recorded as Interest Income or Interest Expense, as the case may be. Speaking more directly, the difference between the face value of a note and the cash received when the note is discounted is

Interest Income if the cash received is more than the face of the note.
Interest Expense if the face of the note is more than the cash received.

"Discounting" a note at a bank is a practice of common commercial occurrence. From an accounting standpoint it is important to understand thoroughly the procedures which underlie the recording of a note-discounting transaction. Consequently, a summary of the steps to be followed in determining the cash proceeds of a note which is being discounted may be helpful:

1. Determine the value of the note as of its maturity date. By maturity value is meant the number of dollars required to be paid when the note falls due.
2. Determine the due date of the note.
3. Determine the number of days the note has yet to run. The date on which the note is given is *not* counted; the date on which the note is due *is* counted.
4. Calculate the bank discount by applying the discount rate against the maturity value of the note for the number of days as determined in the third step.
5. The difference between the values as determined in the first and fourth steps is the cash value, or bank proceeds, of the note.

In following these steps of discounting, correct calculations of interest and discount are necessary. In these calculations it is well to remember these points:

1. *As to interest,* if the term of a note is given in days, use a 360-day year for the calculation of interest. If the term of a note is given in months, use a 12-month year for the calculation of interest. A 2-month note, or a 60-day note, for example, is an interest period of one sixth of a year.
2. *As to discount,* if the discount period is stated in days, use a 360-day year. If stated in months, use a 12-month year.

The Discounted Note Is Paid by the Maker at Maturity

On July 1, 1958, Lloyd J. Martin paid the First National Bank in full for his note in favor of William E. Trent, dated March 1, 1958.

Without Interest

July 1	Notes Receivable Discounted . . .	1,000.00	
	Notes Receivable		1,000.00
	To record payment by maker of Lloyd J. Martin note.		

With Interest at 6%

July 1	Notes Receivable Discounted . . .	1,000.00	
	Notes Receivable		1,000.00
	To record payment by maker of Lloyd J. Martin note.		

When the maker pays his note at maturity it is obvious that the act of payment has the effect of releasing each endorser from his contingent liability for the payment of the note. The purpose of each of the two entries above is to remove this contingent liability from the books of account. These entries may be made as soon as the period in which an endorser must be notified (of nonpayment) has expired. If no notice of nonpayment is received, it is in order to assume that the note has been paid.

The Discounted Note Is Dishonored at Maturity

On July 1, 1958, Lloyd J. Martin refused to pay the First National Bank the amount due on his note of March 1, 1958, in favor of William E. Trent. Protest fees, $1.53. William E. Trent thereupon took up the note, paying the bank the amount due.

Without Interest

July 1	Lloyd J. Martin . .	1,001.53	
	Cash		1,001.53
	To record payment of dishonored note, and protest fees of $1.53.		
July 1	Notes Receivable Discounted . . .	1,000.00	
	Notes Receivable.		1,000.00
	To extinguish contingent liability set up when Martin note was discounted. This note was paid by us July 1 on account of dishonor.		

With Interest at 6%

July 1	Lloyd J. Martin . .	1,021.53	
	Cash		1,021.53
	To record payment of dishonored note, together with protest fees, $1.53, and interest, $20.00.		
July 1	Notes Receivable Discounted . . .	1,000.00	
	Notes Receivable.		1,000.00
	To extinguish contingent liability set up when Martin note was discounted. This note was paid by us July 1 on account of dishonor.		

Notes Receivable on the Balance Sheet

One way of showing notes receivable on the balance sheet is as follows:

Notes Receivable	$100,000.00	
Less Notes Receivable Discounted . . .	40,000.00	$60,000.00

This method shows the net amount of notes receivable on hand as an asset, and it also shows the contingent liability existing for unmatured notes which have been discounted.

Current accounting practice prefers, however, to show among the assets of a balance sheet only the notes receivable which are actually on hand, thus:

Notes Receivable	$60,000.00

and to show the discounted notes receivable in a memorandum in the bal-

ance sheet. This memorandum may be a footnote appended to the balance as follows:

Note: The company is contingently liable, December 31, 1958, for notes receivable discounted in the amount of $40,000.00.

In place of a footnote, a memorandum may be placed in the body of the balance sheet as shown in the following balance sheet excerpt:

Liabilities and Capital

Current Liabilities:		
Accounts Payable		$200,000.00
Income Taxes Payable		50,000.00
		$250,000.00
Long-Term Liabilities:		
Mortgage Payable, due July 1, 19__		100,000.00
		$350,000.00
Contingent Liabilities:		
Notes Receivable Discounted	$40,000.00	
Capital:		
Alden J. Coffman, Capital		300,000.00
		$650,000.00

Notes Receivable Register

When many notes are received, it will be advantageous to record these notes receivable in a separate book of original entry called a notes receivable register. Such a book is illustrated on pages 220–221.

At the end of each month the totals of the debit and credit columns of the notes receivable register are posted to the general ledger as is done with the column totals of any other book of original entry. The total of all open items—i.e., all notes receivable not paid or discounted—in the notes receivable register should equal the difference between the balances of the Notes Receivable and the Notes Receivable Discounted accounts.

An alternative method for recording notes receivable in the notes receivable register is as follows: One or more pages of the notes receivable register are reserved for each month in which notes receivable mature. Each note, as received, is entered on the page of the month in which it matures. Thus notes received in January, and due in

January will be entered on the January page,
February will be entered on the February page,
March will be entered on the March page,
April will be entered on the April page;

At the end of each month the notes received in that month are totaled, and the totals transferred to a summary page, from which the grand total is posted to the general ledger.

NOTES RECEIVABLE

MONTH OF AUGUST, 1958

DATE				DEBIT NOTES RECEIVABLE	L.F.	CREDIT ACCOUNTS RECEIVABLE	TO BE PAID BY (*Fill in only when drawee differs from name credited*)
Received		*Of note*					
1958		1958					
Aug.	2	July	31	1,000.00		Irving J. Bush	
	6	Aug.	5	846.42		Chas. E. Moore	
	10		10	500.00		Henry S. Marshall	George E. Palmer

The advantage of this method is that it groups notes receivable according to the maturity dates of the notes. In this way, note collections are easily followed, and the amount of expected monthly cash collections from notes receivable can be closely estimated.

A notes receivable register is not convenient to use where notes receivable are payable in installments. Where this is the case it is better to open a separate notes receivable account with each customer and to record all collections on notes in these accounts. In other words, this arrangement constitutes a subsidiary ledger whose controlling account is the Notes Receivable account in the general ledger. The notes receivable register, as the original book of entry, would be simplified accordingly.

An even better arrangement is to separate the subsidiary note accounts into two groups, one for notes receivable, and one for notes receivable which have been discounted.

The contingent liability of a business for installment notes receivable which have been discounted is easily established if regular reports of collections are obtained from the banks or discount companies with which discount business is transacted. The collections reported by these banks or discount companies should be recorded in the appropriate notes receivable discounted accounts.

ACCOUNTING FOR NOTES PAYABLE

The following note (the same as that shown on page 213) will be used as the base for the illustrative discussion of this section.

This note is a note receivable to William E. Trent, and a note payable to Lloyd J. Martin. As with notes receivable, notes payable are entered upon the books at face value.

The accounting entries for this note as a "note receivable" were illustrated in the preceding section of this chapter. The entries for this note from the viewpoint of the debtor rather than the creditor, i.e., as a "note payable" are illustrated in the discussion below.

REGISTER

TIME		DUE													INTEREST RATE	DATE		RE-MARKS
Mo.	*Days*	*Year*	*J*	*F*	*M*	*A*	*M*	*J*	*J*	*A*	*S*	*O*	*N*	*D*		*Paid*	*Dis-counted*	
3	60	1958									29				6 %			
	60											9	5		7 %			

Due_____ New York, N.Y., March 1, 1958. $1,000.00

Four months after date, I promise to pay to the order of_____

William E. Trent at Royal State Bank

One Thousand and no/100 Dollars.

For value received. Lloyd J. Martin

The Note Is Issued in Favor of a Merchandise Creditor

On March 1, 1958, Lloyd J. Martin gave his four-month note to William E. Trent in part payment of his account.

Without Interest

Mar. 1	William E. Trent .	1,000.00	
	Notes Payable .		1,000.00
	To record issuance of 4-month note.		

With Interest at 6 %

Mar. 1	William E. Trent .	1,000.00	
	Notes Payable .		1,000.00
	To record issuance of 4-month, 6 %, note.		

If, in lieu of the interest-bearing note, Mr. Martin had given a note for $1,020.00 (the face of the note including $20.00 interest to maturity), his entry for the issuance of the note would have been

Mar. 1	William E. Trent	1,000.00	
	Interest Expense	20.00	
	Notes Payable		1,020.00
	To record issuance of 4-month note, interest of $20.00 included in face of note.		

The entry to record the payment of the note would be:

July 1	Notes Payable		1,020.00	
	Cash			1,020.00
	Paid William E. Trent for note of March 1, 1958.			

Banks, in making loans to customers, often use notes whose face values include interest to maturity.

The Note Is Issued in Favor of a Bank

On March 1, 1958, Lloyd J. Martin obtained a loan at the First National Bank for which he gave his four-month note. (The note would be identical with the one illustrated above except that the payee would be the First National Bank.) The bank discount rate is 6%.

Without Interest

Mar. 1	Cash.	980.00	
	Interest Expense . .	20.00	
	Notes Payable .		1,000.00
	To record 4-month note to First National Bank.		

With Interest at 6%

Mar. 1	Cash	1,000.00	
	Notes Payable .		1,000.00
	To record 4-month 6% note to First National Bank.		

The cash received on the first note is computed as follows:

Value of note at maturity	$1,000.00
Less discount on maturity value for 4 months, at 6%	20.00
Cash proceeds of note	$ 980.00

Theoretically, the amount of cash to be received on the second note would be computed as follows:

Value of note at maturity	$1,020.00
Less discount on maturity value for 4 months, at 6%	20.40
Theoretical cash proceeds of note	$ 999.60

In this particular kind of case, however, banks deviate slightly from theory. If a noninterest-bearing note is discounted on the date of the note—and the rate of interest carried by the note is the same as the rate of interest charged by the bank—the face value of the note will be advanced by the bank. Therefore, in the above example, the cash proceeds will be $1,000.00, not $999.60.

The two notes payable would be recorded in the cash receipts book as follows:

CASH RECEIPTS BOOK

DATE		ACCOUNT CREDITED	EXPLANATION	L.F.	CREDIT		DEBIT	
					Miscellaneous	*Accounts Receivable*	*Sales Discounts*	*Cash*
1958								
Mar.	1	Notes Payable	First Nat'l Bank		1,000.00			980.00
		Interest Expense			(20.00)			1,000.00
	1	Notes Payable	First Nat'l Bank		1,000.00			

The item in parentheses, as before, indicates a debit entry.

In the entry for the discounting of the noninterest-bearing note, the discount of $20.00 was debited to the Interest Expense account. This is common accounting practice. In theory, however, a debit to interest expense is not correct because true interest expense can be realized only after the passage of a period of time. The alternative account for the debit of $20.00 would be Prepaid Interest Expense. This value of $20.00 is the interest expense for March, April, May, and June. The true interest expense for each of these months, therefore, is $5.00. If the interest expense for each of these months were to be recorded monthly, the entry would be:

Interest Expense	5.00	
Prepaid Interest Expense		5.00
To record interest expense for the month of _____.		
1/4 × $20.00 = $5.00.		

On the balance sheet of a business, Prepaid Interest Expense is *commonly* handled as a current asset. In theory, however, Prepaid Interest Expense is a *valuation* account which should be deducted from Notes Payable; the difference between these two values is the cash valuation of the liability for notes payable.

This section may be concluded by observing that "discounting a note at a bank" is a term rather indiscriminately used to apply to two distinct kinds of note transactions: (1) transferring a note receivable to a bank by endorsing the note in favor of the bank, and receiving cash. (2) borrowing funds from a bank by executing a note payable in favor of the bank. In both cases the cash to be received from the bank will be the maturity value of the note less the amount of discount for the period of time which the note has yet to run.

The Note Is Paid at Maturity

On July 1, 1958, Lloyd J. Martin paid William E. Trent (or First National Bank) in full for his note of March 1, 1958.

Without Interest

July 1	Notes Payable . .	1,000.00	
	Cash		1,000.00
	Paid W. E. Trent for note dated March 1, 1958.		

With Interest at 6%

July 1	Notes Payable . .	1,000.00	
	Interest Expense .	20.00	
	Cash		1,020.00
	Paid W. E. Trent for note dated March 1, 1958, and interest at 6%.		

The Note Is Partly Paid at Maturity

On July 1, 1958, Lloyd J. Martin paid $450.00 on his four-month note to William E. Trent, dated March 1, 1958, and gave a new sixty-day note for the balance.

	Without Interest				*With Interest at 6%*			
July 1	Notes Payable . . .	450.00		July 1	Notes Payable . . .	450.00	
	Cash		450.00		Interest Expense . .	20.00	
	For part payment of note to Wm. E. Trent dated March 1, 1958.				Cash		470.00
					For part payment of note to Wm. E. Trent, dated March 1, 1958, with 6% interest in full to date.		
July 1	Notes Payable . . .	550.00		July 1	Notes Payable . . .	550.00	
	Notes Payable . .		550.00		Notes Payable . .		550.00
	To record issuance of new 60-day note for unpaid balance on Wm. E. Trent note of March 1, 1958.				To record issuance of new 60-day, 6%, note for unpaid balance on Wm. E. Trent note of March 1, 1958.		

The Note Is Dishonored at Maturity

No entry is necessary. The debt is still an outstanding note payable.

Notes Payable Register

As with notes receivable, a special book of original entry may, if desired, be used to record notes payable. In form, the notes payable register is very much like the notes receivable register; hence it need not be specifically illustrated here.

ACCOUNTING FOR DRAFTS

Definition of a Draft

A bill of exchange or draft is defined by the Uniform Negotiable Instruments Act as follows:

> A bill of exchange is an unconditional order in writing addressed by one person to another, signed by the person giving it, requiring the person to whom it is addressed to pay on demand or at a fixed or determinable future time a sum certain in money to order or to bearer.

Example

$2,000.00 Minneapolis, Minn. May 10, 1958

Sixty days after date, pay to the order of Ourselves

Two Thousand and No/100 - - - - - - - - - - - Dollars

To: John A. Welch
Winona, Minn.

CENTRAL SALES COMPANY
By Carl E. Nelson

Why Drafts Are Used

Drafts are used by creditors for several reasons:

1. To speed collections on open accounts receivable.
2. To ship merchandise on a C.O.D. or "note" basis rather than upon an open account basis. To obtain the merchandise, the purchaser must present the bill of lading to the transportation company. To obtain the bill of lading, the purchaser must pay or accept the draft at his local bank. The draft and the order bill of lading (properly endorsed) have been sent to the purchaser's bank by the seller's bank. The bank of the purchaser has been instructed to deliver the bill of lading only when the draft has been honored.
3. To obtain a written acknowledgment of a debt by a debtor.
4. To obtain a negotiable instrument which, like any note receivable, may be discounted by the holder of the note in order to obtain funds.

Characteristics of a Draft

A draft is a negotiable instrument. The essential characteristics of a promissory note are also the essential characteristics of a draft. Since these characteristics have already been described (on page 209), it is not necessary to repeat them here. New features only deserve attention.

Broadly speaking, drafts are of two kinds:

1. Sight Drafts. A sight draft is a draft payable "at sight," i.e., it is payable immediately upon presentation.

2. Time Drafts. A time draft is a draft payable after the lapse of a designated period of time as, for example, "30 days after sight" or "30 days after date."

In practice, drafts are such instruments as commercial drafts, trade acceptances, and bank drafts and checks. A trade acceptance is a time draft arising through the sale of merchandise. A trade acceptance always contains a statement to this effect; the statement might read as follows:

> The obligation of the acceptor of this draft arises out of the purchase of goods from the drawer.

There are three parties to a draft:

1. The *drawer* or *maker* of the draft. In contrast to ordinary promissory notes, drafts originate with the creditor party of a transaction.
2. The *drawee* or the person upon whom the draft is drawn, i.e., the one who will pay the instrument.
3. The *payee* or the person to whom money is payable. The payee is commonly the same person as the drawer.

The drawer orders the drawee to pay the payee. Obviously, the drawee cannot be made to pay unless he has agreed to do so. A draft, therefore, is

not an obligation or binding agreement until it has been agreed to, or "accepted," by the drawee. Acceptance of a

1. sight draft is evidenced by drawing a check in payment;
2. time draft is evidenced by writing across the face of the draft the word "accepted," the date, and the debtor's signature, thus:

Accepted
May 12, 1958
John A. Welch (signature)

Accounting for Drafts

It should be stated, immediately, that acceptance by the drawee *must* precede the incorporation of drafts and draft shipments in the financial statements of a business. Draft shipments are not completed transactions until drafts have been accepted by drawees. It is to be expected, however, that a business will maintain a memorandum record to provide information as to outstanding unaccepted drafts.

To all intents and purposes an accepted sight draft is simply a cash transaction. A payment of cash is made by the drawee and a collection of cash is made by the payee.

For accounting purposes an accepted time draft is a note payable to the drawee and a note receivable to the payee.

Accounting for Sight Drafts

If the draft illustrated on page 224 had been payable "at sight," its acceptance would have been evidenced by its immediate payment. The entries would be

on the books of the Central Sales Company, payee:

Cash	2,000.00	
Accounts Receivable, John A. Welch		2,000.00
To record payment of sight draft dated May 10, 1958.		

on the books of John A. Welch, drawee:

Accounts Payable, Central Sales Company	2,000.00	
Cash		2,000.00
To record payment of sight draft dated May 10, 1958.		

Accounting for Time Drafts

When the time draft illustrated on page 224 has been "accepted," the entries would be

on the books of the Central Sales Company, payee:

Notes Receivable	2,000.00	
Accounts Receivable, John A. Welch		2,000.00

To record acceptance of 60-day draft, dated May 10, 1958.

on the books of John A. Welch, drawee:

Accounts Payable, Central Sales Company	2,000.00	
Notes Payable		2,000.00

To record acceptance of 60-day draft, dated May 10, 1958.

When this draft is paid on July 9, 1958, the entries would be: on the books of the Central Sales Company, payee:

Cash	2,000.00	
Notes Receivable		2,000.00

To record collection of 60-day draft, dated May 10, 1958.

on the books of John A. Welch, drawee:

Notes Payable	2,000.00	
Cash		2,000.00

To record payment of 60-day draft, dated May 10, 1958.

Draft Register

Where a large amount of business is transacted by shipping merchandise under order bills of lading, sight or time drafts attached, the shipments may be recorded in the regular sales book. Much better, however, is the maintenance of a separate sales book called the draft register, in which all draft shipments are recorded.[3] This book is operated as a second book of original entry for sales; the debit posting, however, is to Drafts Receivable rather than to Accounts Receivable. This is for the purpose of drawing a line of demarcation between the two kinds of receivables. As each draft is taken up, the date of its acceptance is noted opposite the entry of the draft in the draft register. The total of the open items in the draft register is equal to the balance of the Drafts Receivable account in the general ledger. This practice is followed by the Ford Motor Company in accounting for sight drafts.

In lieu of a draft register, or a memorandum record for the recording of outstanding drafts (as above), some companies—as a matter of bookkeeping convenience—record outgoing sight and time draft shipments as if they were ordinary sales on credit. When the draft is accepted, Cash or Notes Receivable is debited, and Accounts Receivable credited. If the

[3] If both sight drafts and time drafts are employed, a sight draft register and a time draft register should be used with a general ledger controlling account for each register.

draft is not accepted and the shipment returned, the original entry is reversed.

When financial statements are being prepared at the end of an accounting period, Accounts Receivable and Sales must be adjusted with respect to outstanding, unaccepted drafts covering outgoing shipments on which title has not passed. Such merchandise-and-draft shipments are not sales. They should be eliminated from Sales and Accounts Receivable when financial statements are being prepared. The merchandise involved should be included as a part of the ending inventory and should be priced at cost. Without these adjustments, the net income of the period would be overstated.

PROBLEMS

Notes Receivable

Problem 11–1. Prepare the entries to be made on the books of the payee for the note transactions described below. All notes are received in payment of accounts receivable. The bank rate, where required, is 6%.

DATED	MAKER	TERM	INTEREST	AMOUNT	TRANSACTION
Oct. 21	H. C. Riggs	2 months		1,251.00	Oct. 22: The note is received. 29: The note is discounted at the First National Bank. Dec. 21: The note is paid.
22	W. L. Fairfield	2 months	8%	543.11	Oct. 22: The note is received. Nov. 2: The note is discounted at the First National Bank. Dec. 22: The note is paid.
22	D. K. Merritt	120 days	7%	1,236.88	Oct. 23: The note is received. Jan. 9: The note is discounted at the First National Bank. Bank rate 8%. Feb. 19: The note is paid.
23	W. D. Lee	90 days		500.00	Oct. 23: The note is received. Nov. 20: The note is discounted at the First National Bank. Jan. 21: The note is dishonored. Protest fees, $5.00.
25	F. L. Jones	3 months	6%	450.00	Oct. 26: The note is received. Nov. 29: The note is discounted at the First National Bank. Bank rate 8%. Jan. 25: The note is dishonored. Protest fees, $5.00.

Problem 11–2. What entry should be made on the books of the payee when the following note receivable is discounted?

Dated:	January 17, 19—
Amount:	$843.77
Term:	Ninety days
Running interest:	8%
Discounted:	February 27, at 6%

Problem 11–3. What entry should be made on the books of the payee when the following note receivable is discounted?

Dated:	October 17, 19__
Amount:	$1,423.00
Term:	Ninety days
Running interest:	7%
Discounted:	November 28, at 5%

Problem 11–4. What entry should be made on the books of the payee when the following note receivable is discounted?

Dated:	July 14, 19__
Amount:	$1,286.14
Term	Ninety days
Running interest:	6½%
Discounted:	August 29, at 8%

Problem 11–5. What entry should be made on the books of the payee when the following note receivable is discounted?

Dated:	June 16, 19__
Amount:	$5,275.00
Term:	Three months
Running interest:	6%
Discounted:	July 8, at 4%

Problem 11–6. What entry should be made on the books of the payee when the following note receivable is discounted?

Dated:	August 11
Amount:	$2,715.55
Term:	Two months
Running interest:	8%
Discounted:	August 22, at 6%

Problem 11–7. Included among the notes receivable of the ABC Company was one from W. L. Gordon, dated October 22, for $786.27, with running interest at 7%, and due in 90 days. On November 20 the note was discounted at the bank rate of 6%. At maturity the note was dishonored; protest fees were $5.00. What entries should be made by the ABC Company on November 20 and the date of note maturity, January 20?

Problem 11–8. The preliminary condensed balance sheet of James T. Allen on December 31, 19__, was

Accounts Receivable . .	$ 63,084.99	Accounts Payable . . .	$ 3,000.00
Notes Receivable . . .	39,915.01	James T. Allen, Capital .	100,000.00
	$103,000.00		$103,000.00

Having no funds on hand, Mr. Allen decided to raise some cash by discounting one of his notes receivable. Accordingly, a note receivable for

$9,915.01 was discounted at the bank at 6% on December 31, 19__. This note, dated November 9, was due in 90 days, and carried interest at the rate of 6%.

Prepare the new balance sheet, giving effect to the discounting transaction.

Notes Payable and Drafts

Problem 11–9. On April 1, 19__, Ernest L. Raymond discounted his own note (dated April 1, 19__, and due July 1, 19__, without interest) for $3,000.00 with the Fremont National Bank (whose discount rate was 6%). The note was paid on its maturity date. What entries should be made on April 1 and July 1?

What entries should have been made if the note had carried 6% running interest?

Problem 11–10. What entry should be made on the books of the maker when the following note payable is discounted?

Dated:	April 6, 19__
Amount:	$1,000.00
Payee:	First National Bank
Term:	60 days
Running interest:	none
Discounted:	April 6, 19__, at 6%

Problem 11–11. What entry should be made on the books of the maker when the following note payable is discounted?

Dated:	April 7, 19__
Amount:	$3,000.00
Payee:	First National Bank
Term:	90 days
Running interest:	6%
Discounted:	April 7, 19__, at 6%

Problem 11–12. On April 20 Carroll & Son made a purchase of merchandise from L. E. Sears & Company for $836.74, terms 2% discount for immediate cash payment, net 60 days. By arrangement with the seller, the invoice is paid net, $820.01, with a 60-day note payable dated April 20. The face value of the note was $820.01 plus 6% interest for 60 days, $8.20, or a total of $828.21. What entry should be made to record the issuance of this note?

Problem 11–13. James E. Cox has on hand a purchase invoice of the Hudson Sales Company, $1,000.00, dated July 21, 19__, and payable by the 10th of the month following date of invoice, less 5% cash discount. When August 10 arrives, Mr. Cox is temporarily short of cash but, not

wishing to lose the cash discount, he offers the Hudson Sales Company his 90-day note, without interest, in settlement. The Hudson Sales Company replies that a note settlement will be satisfactory provided the face of the note is an amount large enough to net the Hudson Sales Company $950.00 by immediate discount of the note at its bank (rate 6%). What entry should be made by Mr. Cox to record the issuance of the note?

Problem 11–14. On April 15 James E. Cotter made a purchase of merchandise from Davis & Company, $1,324.80, 5/10, n/30. On April 24 a note payable of $1,258.56 was issued in payment ($1,324.80 less 5% cash discount of $66.24, or net of $1,258.56). The note is accepted by Davis & Company at its cash value at the company's bank as of April 25, the company allowing cash discount as justified by the cash value of the note. What entry should be made by Mr. Cotter to record the issuance of the note?

Problem 11–15. Prepare the entries to be made on the books of the Belmont Sales Company for the following transactions:

July

2 Merchandise is shipped under sight draft bills of lading to L. E. Titus, $1,214.11, and Cort & Cort, $732.50.
5 Merchandise is purchased from Mead & Company, $514.25, under terms of a 30-day trade acceptance, which is taken up.
7 The bank advises that the L. E. Titus draft has been collected and that Cort & Cort have refused to pay their draft.
8 Merchandise is shipped to the Welch-Gardner Company under terms of a 60-day trade acceptance, $1,899.76.
10 The Welch-Gardner draft is accepted.

August

2 The account of L. A. Simpson, $1,296.00, is past due. Accordingly, a 60-day 7% sight draft, dated today, is drawn on Mr. Simpson in favor of ourselves.
4 Mr. Simpson accepts the draft.
The Mead & Company draft of July 5 is paid.
22 The Simpson draft is discounted at the First National Bank, whose discount rate is 6%.

September

3 The Simpson draft of August 2 is paid.
6 The Welch-Gardner draft of July 8 is paid.

Problem 11–16. To cover a shipment of merchandise to its customer, Baker & Co., Inc., drew a time draft for $1,284.06 on F. M. Walters in favor of themselves. The draft was dated April 12, due August 1, and carried 6½% running interest. The draft was accepted April 30 and was discounted June 28, bank rate 7%.

What entries should be made on the books of Baker & Co., Inc.? on the books of F. M. Walters?

Problem 11–17. On June 30, 19__, the books of Henry P. Baldwin & Co. included the following account receivable and account payable:

RAY C. KRAMER

May 1	2/10, n/60	568.14
June 28	2/10, n/30	1,209.62

BEN A. ADLER

June 26	5/10, n/30	1,407.60
29	n/60	492.40

With respect to these two accounts, the following transactions occurred on the dates shown:

July

5 Borrowed funds from the First National Bank by giving a noninterest-bearing note, due September 1, for $3,000.00. Bank rate, 7%.

6 Gave Mr. Adler a check for $1,140.00 in part payment of invoice of June 26, this payment including a proper allowance for 5% cash discount.

8 Received a 30-day 6% note, dated today, from Mr. Kramer in payment of invoice of June 28, less 2% discount (which was allowed). Discounted the Kramer note at the bank (discount rate, 6%).

August

7 The Kramer note, due today, was not paid. Henry P. Baldwin & Co. paid the amount due and received the note from the bank.

10 Mailed a check to Ben A. Adler for the balance of his account, $700.00.

September

1 The note payable (issued July 5) is paid.

October

1 Drew two drafts, dated today, on Mr. Kramer in favor of Henry P. Baldwin & Co. The first draft was a sight draft for $579.88 covering sales invoice of May 1, $568.14, plus 8% interest for 93 days, $11.74. The second draft was a 30-day 8% note, dated today; the face of this draft was sales invoice of June 28, $1,209.62, plus 8% interest for the period over which this amount has been delinquent. Both drafts were immediately accepted.

31 The Kramer 30-day sight draft is paid.

Required

What entries should be made on each of the above dates on the books of Henry P. Baldwin & Co.?

Chapter 12 ADJUSTING ENTRIES

Why Current Accounts of the Ledger Need Adjustment

The preparation of financial statements at the end of an accounting period would be a relatively simple matter if the balances of the accounts of a ledger could be accepted as they stand. Very commonly, however, this is not possible because the balances of many accounts become inaccurate merely through the expirations of values and the passage of time. Invariably, therefore, it is necessary for the balances of some accounts to be corrected or "adjusted" before the balances of these accounts can be accepted as accurate and completely meaningful. The balances of these accounts must be corrected by making "adjusting entries." After giving effect to these adjusting entries, the new balances of the affected accounts will be correct. When this has been accomplished, it is then in order to prepare the statement of income and the balance sheet.

These adjusting entries arise, basically, because of the necessity of measuring the income of a business over relatively short periods of time. A year, in the life of a business, is one of these "relatively short periods of time." At the end of a given year, for example, some of the assets acquired by a business earlier in the year will have been converted into expense. Similarly, some of the expenses recorded during the year will not have been completely consumed by the end of the year. Therefore, *if the net income of a business for a given year is to be measured fairly,* the year in question should be charged only with those expenses, those costs actually consumed in producing the income earned in that year. And, as to income, the year should be credited only with the income actually earned in that year. The real purpose of adjusting entries, therefore, is that of properly assigning revenues and expenses to the accounting periods in which they have been earned or consumed, respectively, in order that incomes and costs may be matched properly and periodic net incomes be determined fairly.

Some examples of adjusting entries are discussed and illustrated in the pages which follow. Four general illustrations appear first. These are followed by specific examples showing entries.

1. At the end of a current accounting period, the Merchandise Inventory account, before adjustment, represents the accounting value of the inventory on hand at the beginning of the period. This value, however, is generally not the value of the inventory on hand at the end of the period. In order, therefore, to show the value of the inventory on hand at the *end* of the period, the Merchandise Inventory account must be adjusted by clearing away the old value and replacing it with the new. This adjustment is one with which the student is already familiar.

2. At the end of an accounting period some of the expense and income accounts of a business must be adjusted because the balances of these accounts do not fairly represent the expense or income which has been incurred or earned in an accounting period. One explanation of this condition relates to the fact that the incurring of an expense does not necessarily coincide with the date of its payment. An expense may be incurred

before the period in which payment is made,
during the period in which payment is made, or
after the period in which payment is made;

but, often, the debit to an expense account is made only when the expense bill is paid. Consequently, when the financial statements of a business are to be prepared, expense accounts must first be adjusted so that the current accounting period is charged with all expenses incurred, paid or not paid, and relieved of expense expenditures which are properly assignable to future accounting periods. Expense accounts, after adjustment, show the amounts of expense fairly assignable to the accounting period covered by a current statement of income.

Similarly, the earning of an income does not necessarily coincide with the date on which the income is collected in cash. The actual "earning" of an income may occur

before the period in which collection is made,
during the period in which collection is made, or
after the period in which collection is made;

but, frequently, the credit to income is made only at the time of its receipt in cash. Consequently, when the financial statements of a business are to be prepared, income accounts must first be adjusted so that the current accounting period is credited with all income earned, even though not yet received in cash, and relieved of income which is assignable as income yet to be earned by future accounting periods. Income accounts, after adjustment, will show the amounts of income fairly allocable to the period covered by a current statement of income.

3. Fixed assets, such as automobiles, office equipment, or machinery, are constantly and continuously declining in value as their services are consumed by a business. This decline in accounting value is called depreciation expense. The accounts which represent these fixed assets must be adjusted at least annually in order to reflect the costs consumed in a cur-

rent accounting period and in order to reflect the reduced accounting values of these assets on the balance sheet. The reduced value of each of these fixed assets is a reflection of the reduced amount of service expected to be received from these assets in the future.

4. Assets such as accounts receivable are recorded in the ledger at their contract values. However, on the date for which a balance sheet is to be prepared, accounts receivable are usually appraised as being worth something less than their total contract value. Accounts receivable are generally considered as being worth less than their contract value because of the expectation that some accounts will not be collected. Where these conditions prevail, an adjustment of the accounting value of accounts receivable is necessary. The purpose of this adjustment is to assign the loss on uncollectible accounts receivable as an expense (or revenue-cost) of the current accounting period and to bring the book value of accounts receivable into agreement with cash values, i.e., the amount of cash expected to be collected on currently outstanding accounts receivable.

Similar comments apply to notes receivable.

These examples are four general illustrations of the necessity for adjusting the balances of ledger accounts at the end of an accounting period. It should be apparent that these adjustments *must* be made before it is possible to prepare income statements and balance sheets which are fairly stated. That these statements be "fairly stated" is fundamental to management in its use of these statements.

Prepaid Expenses

Prepaid expenses are expenditures which, at the end of an accounting period, have not been consumed. They are inventories of operating supplies or they are services receivable. These values, as yet unconsumed, will become expense in the normal course of the future operations of a business. They will be used up in the production of future income. They are, therefore, *costs* of *future* income.

Although these expenditures have been debited to various expense or asset accounts on the books of a business, only the portions of the materials or services *actually* consumed during an accounting period should be considered as an *expense* of that period. The values representing unconsumed costs should be carried forward to the next accounting period as prepaid expenses. As costs of future income, these prepaid expenses appear as current assets in the end-of-the-period balance sheet. The amount of each prepaid expense, in the case of materials, is usually determined by taking a physical inventory and, in the case of services, by valuing the unused portion on a time basis. In summary, then, when expense materials or services have not all been used up by the end of an accounting period, the portion consumed is an expense and the portion unconsumed is an asset.

Depending upon the account debited in the original accounting for an

expense expenditure,[1] the adjusting entry to record a prepaid expense (at the end of an accounting period) may be made as follows:

1. *If the expenditure was originally debited to an expense account,* the unconsumed amount should be removed from the expense account and recorded as an asset. Expense accounts should be credited with the amounts to be deferred. The debits may be made either to separate asset accounts like Prepaid Rent, Prepaid Taxes, or Prepaid Interest, or to one summary account called simply Prepaid Expenses.

2. *If the expenditure was originally debited to an asset account,* the amount consumed should be taken out of the prepaid expense account and debited to its related expense account. For some prepayments, this adjusting entry may be placed on the books *monthly*. See Example 4, below (and also Chapter 14, page 255).

Example 1

During the year 1958, a small business made several purchases of coal, all purchases being debited to the Fuel Expense account for a total of $1,400.00. On December 31, 1958, a physical inventory revealed that the amount of coal on hand was $400.00. In order to adjust the Fuel Expense account so that its balance will show the true expense for 1958, $1,000.00, and in order to recognize the asset of unconsumed coal on hand, December 31, 1958, $400.00, the following adjusting entry would be necessary:

Prepaid Expenses		400.00	
Fuel Expense			400.00
To record inventory of coal, December 31, 1958.			

After this entry has been posted, the two accounts would appear as follows:

PREPAID EXPENSES

1958										
Dec.	31			J72	400.00					

FUEL EXPENSE

1958						1958				
Jan.	2			CP1	200.00	Dec.	31		J72	400.00
Feb.	4			CP3	400.00					
Sept.	9			CP20	300.00					
Nov.	16			CP31	200.00					
Dec.	11			CP34	300.00					

The Fuel Expense account, with its new balance of $1,000.00, represents the true fuel expense of 1958. Accordingly, the account is now ready

[1] The account to be debited—an expense or asset account—depends primarily upon the accounting significance of the amount of the expenditure, the rapidity with which the value involved is consumed, and the frequency of transactions of this kind. If the benefit of an expense expenditure extends beyond a single accounting period, it is usual practice to debit an asset account when the expenditure is originally recorded.

for inclusion as one of the operating expenses in the statement of income for the year. And the Prepaid Expense account is ready for inclusion as one of the current assets of the balance sheet, December 31, 1958.

Example 2

On March 1, 1958, a business took out a fire insurance policy on its real and personal property. The policy was for three years and the premium paid was $360.00. The expenditure was debited to Prepaid Insurance. On December 31, 1958, the unexpired insurance premium amounted to 26/36 × $360.00, or $260.00. In order to adjust the Prepaid Insurance account so that its balance will represent the asset on hand, December 31, 1958, $260.00, and in order to record the insurance expense applicable to the year, $100.00, the following adjusting entry would be necessary:

Insurance Expense	100.00	
Prepaid Insurance		100.00
To record insurance expense applicable to 1958, 10 months at $10.00 = $100.00.		

After this entry has been posted, the two accounts would appear as follows:

PREPAID INSURANCE

1958					1958				
Mar.	1		CP6	360.00	Dec.	31		J72	100.00

INSURANCE EXPENSE

1958									
Dec.	31		J72	100.00					

The Insurance Expense account, with its balance of $100.00, represents the true insurance expense of 1958. Accordingly, the account is now ready for inclusion as one of the operating expenses in the statement of income for the year. And the Prepaid Insurance account is ready for inclusion as one of the current assets of the balance sheet, December 31, 1958, $260.00.

Example 3

For the first nine months of 1958, in accordance with the terms of its short-term lease with John E. Miller, Inc., the Blue & White Food Stores Corporation paid a monthly rental of $1,000.00 for the use of certain real estate. On October 1, 1958, the company entered into a five-year lease of this property for an annual rental of $12,000.00, payable in advance. A check for this amount was issued on this date and debited to Rent Expense. At a later date financial statements were to be prepared for the calendar year 1958. In order to adjust the Rent Expense account so that its balance

will show the true rent expense for 1958, $12,000.00, and in order to record the asset of prepaid rent, December 31, 1958, $9,000.00, the following adjusting entry would be necessary:

Prepaid Rent		9,000.00	
Rent Expense			9,000.00
To record rent paid in advance for the first 9 months of 1959.			

After this entry has been posted, the two accounts would appear as follows:

PREPAID RENT

1958 Dec.	31		J72	9,000.00					

RENT EXPENSE

1958 Jan.	1		CP1	1,000.00	1958 Dec.	31		J72	9,000.00
Feb.	1		CP3	1,000.00					
Mar.	1		CP6	1,000.00					
Apr.	1		CP9	1,000.00					
May	1		CP11	1,000.00					
June	1		CP13	1,000.00					
July	1		CP15	1,000.00					
Aug.	1		CP18	1,000.00					
Sept.	1		CP20	1,000.00					
Oct.	1		CP22	12,000.00					

The Rent Expense account, with its new balance of $12,000.00, represents the true rent expense of 1958. Accordingly, the account is now ready for 1958. And the Prepaid Rent Expense account is ready for inclusion as one of the current assets of the balance sheet, December 31, 1958.

Example 4

For the first nine months of 1958, in accordance with the terms of its short-term lease with John E. Miller, Inc., the Blue & White Food Stores Corporation paid a monthly rental of $1,000.00 for the use of certain real estate. On October 1, 1958, the company entered into a five-year lease of this property for an annual rental of $12,000.00, payable in advance. A check for this amount was issued and debited to Prepaid Rent.

At the end of October, November, and December, the following entries were recorded in the journal:

Oct. 31	Rent Expense		1,000.00	
	Prepaid Rent			1,000.00
	To record rent expense for October.			
Nov. 30	Rent Expense		1,000.00	
	Prepaid Rent			1,000.00
	To record rent expense for November.			

Dec. 31	Rent Expense		1,000.00	
	Prepaid Rent			1,000.00
	To record rent expense for December.			

In each of these three entries, the bookkeeping principle involved is simply that of transferring the expired value for a given month from the prepaid expense account to its related expense account.

On December 31, 1958, the two rent accounts would appear as follows:

PREPAID RENT

1958					1958				
Oct.	1		CP22	12,000.00	Oct.	31		J66	1,000.00
					Nov.	30		J69	1,000.00
					Dec.	31		J72	1,000.00

RENT EXPENSE

1958								
Jan.	1		CP1	1,000.00				
Feb.	1		CP3	1,000.00				
Mar.	1		CP6	1,000.00				
Apr.	1		CP9	1,000.00				
May	1		CP11	1,000.00				
June	1		CP13	1,000.00				
July	1		CP15	1,000.00				
Aug.	1		CP18	1,000.00				
Sept.	1		CP20	1,000.00				
Oct.	31		J66	1,000.00				
Nov.	30		J69	1,000.00				
Dec.	31		J72	1,000.00				

The balances of these two accounts, identical with those of Example 3, are now correct and ready for inclusion in the financial statements of 1958.

Other examples of prepaid expenses are prepaid advertising, prepaid taxes, and prepaid interest, as well as unused but usable supplies of advertising, office, and maintenance materials.

The necessity for adjusting entries to care for prepaid expenses should be clear because, without such adjustments,

1. the expenses of an accounting period would be overstated,
2. the net income of the period would be understated,
3. the assets of the balance sheet would be understated because of the omission of prepaid expenses, and
4. net worth would be understated.

Accrued Expenses

At the end of an accounting period there is often no bookkeeping record of certain expenses which have been incurred. For example, a business may normally be expected to have a wage expense and a wage liability for the unpaid payroll as of the close of its fiscal year—say December 31,

1958, with payday being one or more days later. It is common practice for wages to be formally recorded only at the time of payment, although it is evident that the wages referred to are an expense of *all* the days of the wage period and not of the single day on which payment happens to be made. Further, if a payroll period ends December 31, 1958, and the payment of this payroll occurs at a later date like January 2, 3, 4, or 5, it would be a serious accounting error to record the payroll disbursement as an expense of January, 1959, when, actually, the payroll is an expense of 1958.

The expense of wages is typical of those expenses which increase day by day but which are inconvenient to record daily and formally. However, when the end of an accounting period falls between wage-payment dates, the payroll accounts must be brought up-to-date and made factually correct for purposes of the financial statements. It is therefore necessary to record the wages expense incurred by a business up to the close of its accounting period, and also to record the liability for wages owed to employees at the end of the period, even though the payroll may not be immediately due for payment.

In giving expression to adjustments for accrued expenses, the principle involved should be clear: Expenses, incurred and consumed but not recorded on the books at the end of an accounting period, are expenses of that period and the amount owed is a current liability in the end-of-the-period balance sheet. Liabilities for accrued expenses payable are usually required to be paid in cash.

The adjustment to record an accrued expense may be made as follows:

1. *If, at the end of an accounting period, there is no bookkeeping record of accrued expenses*, debits should be made to appropriate expense accounts. Credits should be made either to separate liability accounts like Interest Payable, Taxes Payable, Wages Payable, or to one summary account for all accrued expenses called Accrued Liabilities or Accrued Expenses Payable.

2. *If certain accrued expenses have been debited to expense accounts as incurred*—for some accounts, some businesses do this monthly—each of these expense accounts should be adjusted so that its balance will represent the total of that type of expense incurred during the accounting period. And each expense payable account should be adjusted so that its balance represents the unpaid amount accrued to the date of the end-of-the-period balance sheet. Often, to bring these accounts up to date, the amount of the adjustment is simply the value representing one month's accrual. See Example 3 below.

Example 1

During the year 1958, the disbursements of a business for wages amounted to $45,000.00, Wages Expense being debited. On December 31, 1958, additional wages have been earned by employees amounting to $5,000.00. These wages, however, are not due for payment until the next payday, January 4.

In order to adjust the Wages Expense account so that its balance will show the true wage expense for 1958, $50,000.00, and in order to recognize the liability for wages owed of $5,000.00, the following adjusting entry would be necessary:

Wages Expense		5,000.00	
Wages Payable			5,000.00
To record unpaid payroll, December 31, 1958.			

After this entry has been posted, the two accounts would appear as follows:

WAGES PAYABLE

				1958 Dec.	31		J72	5,000.00

WAGES EXPENSE

1958 Dec.	31	Balance			45,000.00					
			J72		5,000.00					

The Wages Expense account, with its new balance of $50,000.00, represents the true wage expense of 1958. Accordingly, the account is now ready for inclusion as one of the operating expenses in the statement of income. And the Wages Payable account is ready for inclusion as one of the current liabilities of the balance sheet.

Example 2

On January 1, 1958, Durant & Durant issued a $25,000.00, 6% mortgage on certain real estate in favor of John E. Miller, Inc. Interest was payable January 1 and July 1. The interest due July 1, 1958, was paid and debited to mortgage Interest Expense.

Financial statements are to be prepared for the calendar year ending December 31, 1958. On this date the accrued mortgage interest is $750.00 (six months' interest). This interest is not on the books. In order to adjust the Mortgage Interest Expense account so that its balance will show the true mortgage interest expense for 1958, $1,500.00, and in order to record the liability of mortgage interest payable, December 31, 1958, $750.00, the following adjusting entry would be necessary:

Mortgage Interest Expense		750.00	
Mortgage Interest Payable			750.00
To record mortgage interest accrued for 6 months ended December 31, 1958.			

After this entry has been posted, the two accounts would appear as follows:

MORTGAGE INTEREST PAYABLE

							1958					J72	750.00
							Dec.	31					

MORTGAGE INTEREST EXPENSE

1958													
July	1				CP15	750.00							
Dec.	31				J72	750.00							

The Mortgage Interest Expense account, with its new balance of $1,500.00, represents the true mortgage interest expense of 1958. Accordingly, the account is now ready for inclusion as one of the expenses in the statement of income for the year 1958. And the Mortgage Interest Payable account is ready for inclusion as one of the current liabilities of the balance sheet, December 31, 1958.

Example 3

On January 1, 1958, Durant & Durant issued a $25,000.00, 6% mortgage on certain real estate in favor of John E. Miller, Inc. Interest was payable January 1 and July 1. At the end of each month, the following entry was made on the books of Durant & Durant:

Mortgage Interest Expense	125.00	
Mortgage Interest Payable		125.00
To record interest accrued for the month of ____ . . .		

The interest payment of July 1, 1958, was recorded as follows:

Mortgage Interest Payable	750.00	
Cash		750.00
To record semiannual payment of mortgage interest.		

On December 31, 1958, the two interest accounts would appear as follows:

MORTGAGE INTEREST PAYABLE

1958							1958						
July	1				CP15	750.00	Jan.	31				J4	125.00
							Feb.	28				J9	125.00
							Mar.	31				J15	125.00
							Apr.	30				J21	125.00
							May	31				J27	125.00
							June	30				J35	125.00
							July	31				J41	125.00
							Aug.	31				J47	125.00
							Sept.	30				J53	125.00
							Oct.	31				J60	125.00
							Nov.	30				J66	125.00
							Dec.	31				J72	125.00

MORTGAGE INTEREST EXPENSE

1958										
Jan.	31			J4	125.00					
Feb.	28			J9	125.00					
Mar.	31			J15	125.00					
Apr.	30			J21	125.00					
May	31			J27	125.00					
June	30			J35	125.00					
July	31			J41	125.00					
Aug.	31			J47	125.00					
Sept.	30			J53	125.00					
Oct.	31			J60	125.00					
Nov.	30			J66	125.00					
Dec.	31			J72	125.00					

The balances of these accounts, identical with those of Example 2, are now correct and ready for inclusion in the financial statements of 1958.

In this third example it is to be observed that, at the end of each month, accrued expenses are recognized by the debiting of appropriate expense accounts and the crediting of related accrued expense payable accounts. When these expenses are paid, the payments are debited to the appropriate accrued liability accounts.

As illustrated by the Mortgage Interest Expense account, the total of the debits, and the resulting balance, in an expense account should equal the expense *actually incurred* in the accounting period under review. And, as illustrated by the Mortgage Interest Payable account, the total of accrual credits for the period should equal the exact liability for the year.

In some cases—property taxes, for instance—the monthly entry for an accrued expense may temporarily be the month's prorata share of the *estimated* property taxes for the year. When the actual tax liability is finally determined, the balances of the tax accounts should be adjusted to conform to this value, and subsequent monthly entries for property tax accruals would be based on the exact bill for the year.

Other examples of accrued expenses are commissions, interest, rent, salaries, taxes on real and personal property, and social security taxes levied upon an employer.

The necessity for adjusting entries to care for accrued expenses should be clear because, without such adjustments,

1. the expenses of the accounting period would be understated,
2. the net income of the period would be overstated,
3. the liabilities of the balance sheet would be understated because of the omission of accrued expenses payable, and
4. net worth would be overstated.

PAYROLL TAXES By federal law employers are required to withhold income taxes and social security taxes (generally called O.A.S.I. taxes)

from the salary and wage checks of employees. These withheld amounts are current liabilities of the employer.

In addition, certain social security taxes are levied on the employer. These taxes, an expense of the employer, are (1960–1962 rates)

O.A.S.I. taxes: 3% on the first $4,800.00 paid to an employee.
Unemployment taxes: 3% on the first $3,000.00 paid to an employee.

When the financial statements of a business are to be prepared, the payroll taxes levied on the employer must be recorded as an accrued expense of the business. The adjusting entry, pro forma, is:

Social Security Taxes (or Payroll Taxes)	xxx xx	
Social Security Taxes Payable		xxx xx

To record social security taxes levied on the payroll for the month of _____.

Payroll taxes are discussed in detail in Chapter 28.

Deferred Income

Some income transactions may be recorded on the books of a business before the incomes in question have been earned. Suppose, for example, that an insurance company credits Insurance Income for an initial annual premium of $2,400.00 which it collects on December 1, 19__, from a new policyholder. When the statement of income for the year ending December 31, 19__, is being prepared, it would not be correct to consider that all of the collection of $2,400.00 is income earned in the fiscal period under review. The insurance protection is rendered not for the one month of December but for the twelve months beginning with December 1. It follows, therefore, that since 1/12 of the insurance protection was rendered during December, only 1/12 of the collection of $2,400.00, or $200.00, should be considered as income earned in December. The remaining 11/12, or $2,200.00, should be considered as income to be earned in the first eleven months of the new calendar year.

A statement of principle may therefore be made: Income which, in whole or in part, is unearned income at the end of an accounting period, should be excluded from income and included with the liabilities of the balance sheet as unearned or deferred income. When income has been but partially earned at the end of an accounting period, the portion earned is income and the portion unearned is a current liability. It is a liability payable not in cash but in services of one kind or another.

Depending upon the account credited in the original entry to record a collection of income, the adjusting entry for unearned income may be made in one of two ways:

1. *If the income was originally credited to income,* the amount of unearned income should be taken out of income and set up as a liability.

Income accounts should be debited with the amounts to be deferred; the credits may be either to separate liability accounts like Deferred Rent Income or Unearned Interest Income or to one summary account called simply Deferred Income.

2. *If the income was originally credited to a deferred income account,* the amount earned should be taken out of the deferred income account and credited to income. For some incomes some businesses do this monthly. At the end of each month the income earned in that month is transferred from each deferred income account and credited to the related income account. See Example 3 below.

Example 1

For the first nine months of 1958, in accordance with the terms of a short-term lease, John E. Miller, Inc., leased certain real estate to the Blue & White Food Stores Corporation for a monthly rental of $1,000.00. On October 1, 1958, a five-year lease for this property was entered into for an annual rental of $12,000.00, payable in advanee. A check for that amount was received and credited to Rent Income. On December 31, 1958, financial statements are to be prepared for the calendar year 1958. In order to adjust the Rent Income account so that its balance will show the true rent income for 1958, $12,000.00, and in order to recognize the liability of unearned rent income, December 31, 1958, $9,000.00, the following adjusting entry is necessary:

Rent Income		9,000.00	
Deferred Rent Income			9,000.00
To record rent income applicable to the first 9 months of 1959.			

After this entry has been posted, the two rent accounts will appear as follows:

DEFERRED RENT INCOME

				1958 Dec.	31		J84	9,000.00

RENT INCOME

1958 Dec.	31		J84	9,000.00	1958 Jan.	1		CR2	1,000.00
					Feb.	1		CR5	1,000.00
					Mar.	1		CR8	1,000.00
					Apr.	1		CR13	1,000.00
					May	1		CR17	1,000.00
					June	1		CR19	1,000.00
					July	1		CR20	1,000.00
					Aug.	1		CR23	1,000.00
					Sept.	1		CR28	1,000.00
					Oct.	1		CR33	12,000.00

The Rent Income account, with its new balance of $12,000.00, represents

the true rent income of 1958. Accordingly, the account is now ready for inclusion as one of the incomes of the statement of income for the year 1958. And the Deferred Rent Income account is ready for inclusion as one of the current liabilities of the balance sheet, December 31, 1958.

Example 2

For the first nine months of 1958, in accordance with the terms of a short-term lease, John E. Miller, Inc., leased certain real estate to the Blue & White Food Stores Corporation for a monthly rental of $1,000.00. On October 1, 1958, a five-year lease for this property was entered into for an annual rental of $12,000.00, payable in advance. A check for this amount was received and credited to Deferred Rent Income. On December 31, 1958, financial statements are to be prepared for the calendar year 1958. In order to adjust the Deferred Rent Income account so that its balance will represent the liability for unearned rent, December 31, 1958, $9,000.00, and in order to record the year's rent income of $12,000.00, the following adjusting entry is necessary:

Deferred Rent Income		3,000.00	
Rent Income			3,000.00
To record rent income earned in the last 3 months of 1958.			

After this entry has been posted, the two rent accounts will appear as follows:

DEFERRED RENT INCOME

1958					1958				
Dec.	31		J84	3,000.00	Oct.	1		CR33	12,000.00

RENT INCOME

					1958				
					Jan.	1		CR2	1,000.00
					Feb.	1		CR5	1,000.00
					Mar.	1		CR8	1,000.00
					Apr.	1		CR13	1,000.00
					May	1		CR17	1,000.00
					June	1		CR19	1,000.00
					July	1		CR20	1,000.00
					Aug.	1		CR23	1,000.00
					Sept.	1		CR28	1,000.00
					Dec.	31		J84	3,000.00

The balances of these accounts, identical with those of Example 1, are now correct and ready for inclusion in the financial statements of 1958.

Example 3

For the first nine months of 1958, in accordance with the terms of a short-term lease, John E. Miller, Inc., leased certain real estate to the Blue

& White Food Stores Corporation for a monthly rental of $1,000.00. On October 1, 1958, a five-year lease for this property was entered into for an annual rental of $12,000.00, payable in advance. A check for this amount was received and credited to Deferred Rent Income.

At the end of October, November, and December, the following entries were recorded in the journal:

Oct. 31	Deferred Rent Income		1,000.00	
	Rent Income			1,000.00
	To record rent income for October.			
Nov. 30	Deferred Rent Income		1,000.00	
	Rent Income			1,000.00
	To record rent income for November.			
Dec. 31	Deferred Rent Income		1,000.00	
	Rent Income			1,000.00
	To record rent income for December.			

On December 31, 1958, the two rent accounts would appear as follows:

DEFERRED RENT INCOME

1958					1958				
Oct.	31		J74	1,000.00	Oct.	1		CR33	12,000.00
Nov.	30		J79	1,000.00					
Dec.	31		J84	1,000.00					

RENT INCOME

					1958				
					Jan.	1		CR2	1,000.00
					Feb.	1		CR5	1,000.00
					Mar.	1		CR8	1,000.00
					Apr.	1		CR13	1,000.00
					May	1		CR17	1,000.00
					June	1		CR19	1,000.00
					July	1		CR20	1,000.00
					Aug.	1		CR23	1,000.00
					Sept.	1		CR28	1,000.00
					Oct.	31		J74	1,000.00
					Nov.	30		J79	1,000.00
					Dec.	31		J84	1,000.00

The balances of these accounts, identical with those of Examples 1 and 2, are correct and ready for inclusion in the financial statements of 1958.

In this third example it is to be observed that, at the end of each month, the income earned in that month is transferred from the deferred income account and credited to the related income account. As illustrated by the Rent Income account, the total of the credits, and the resulting balance, in an income account should equal the income actually *earned* in the accounting period under review.

Other examples of deferred incomes are interest collected in advance, the receipt of magazine and newspaper subscriptions, the sale of transporta-

tion tickets for future use, and the sale of coupon books or scrip redeemable in merchandise or services.

The necessity for adjusting entries to care for deferred incomes should be clear because, without such adjustments,

1. Incomes of the accounting period would be overstated,
2. The net income of the period would be overstated,
3. The liabilities of the balance sheet would be understated because of the omission of deferred incomes, and
4. Net worth would be overstated.

Accrued Income

At the end of an accounting period it is common to find that some incomes have been earned (i.e., accrued day by day) but not collected or recorded. Interest earned—but not collected—on notes, bonds, or mortgages is an example.

When the financial statements for an accounting period are to be prepared, the income *earned* but not yet collected should be included with the income of the period in question. The amount of income receivable, legally collectible, should appear in the end-of-the-period balance sheet as a current asset.

A statement of principle may therefore be made: Income which, at the end of an accounting period, has been earned but not collected, should be included in the statement of income and with the assets of the end-of-the-period balance sheet.

Depending upon the degree of bookkeeping recognition given to earned but uncollected income on the books, the adjusting entry for accrued income may be made as follows:

1. *If, at the end of an accounting period, there is no bookkeeping record of accrued income,* the amount of earned but uncollected income should be added to the income of the current period and placed in the end-of-the-period balance sheet as an asset. Credits would be made to appropriate income accounts. The debits may be made either to separate asset accounts like Interest Receivable or Rent Receivable or to one summary account called simply Accrued Income Receivable.

2. *If certain accrued incomes have been credited to income accounts as earned*—for some accounts this may be done monthly—each of these income accounts should be adjusted so that it will represent the total of that type of income earned during the accounting period. Often, to bring accounts up-to-date, the amount of the adjustment for an account is simply the value representing one month's accrual. Each income receivable account should be adjusted so that the balance represents the amount accrued to the date of the end-of-the-period balance sheet. See Example 2 below.

Example 1

On January 1, 1958, John E. Miller, Inc., acquired a $25,000.00, 6% mortgage on certain real estate owned by Durant & Durant. Interest was payable January 1 and July 1. The interest due July 1, 1958, was collected and credited to Mortgage Interest Income.

Financial statements are to be prepared for the calendar year ending December 31, 1958. On this date the accrued mortgage interest is $750.00 (six months' interest). This interest is not on the books. In order to adjust the Mortgage Interest Income account so that its balance will show the true mortgage interest earned for 1958, $1,500.00, and in order to record the asset of mortgage interest receivable, December 31, 1958, $750.00, the following adjusting entry is necessary:

Mortgage Interest Receivable	750.00	
Mortgage Interest Income		750.00
To record mortgage interest accrued for 6 months ending December 31, 1958.		

After this entry has been posted, the two accounts would appear as follows:

MORTGAGE INTEREST RECEIVABLE

1958							
Dec.	31		J72	750.00			

MORTGAGE INTEREST INCOME

				1958			
				July	1	CR20	750.00
				Dec.	31	J72	750.00

The Mortgage Interest Income account, with its new balance of $1,500.00, represents the true mortgage interest income of 1958. Accordingly, the account is now ready for inclusion as one of the incomes of the statement of income for the year 1958. And the Mortgage Interest Receivable account is ready for inclusion as one of the current assets of the balance sheet, December 31, 1958.

Example 2

On January 1, 1958, John E. Miller, Inc., acquired a $25,000.00, 6% mortgage on certain real estate owned by Durant & Durant. Interest was payable January 1 and July 1. At the end of each month, the following entry was made on the books of John E. Miller, Inc.:

Mortgage Interest Receivable	125.00	
Mortgage Interest Income		125.00
To record interest accrued for the month of _____.		

The interest collection of July 1, 1958 was recorded as follows:

Cash		750.00	
Mortgage Interest Receivable			750.00
To record semiannual collection of mortgage interest.			

On December 31, 1958, the two interest accounts would appear as follows:

MORTGAGE INTEREST RECEIVABLE

1958										
Jan.	1	Balance		750.00	Jan.	1			CR1	750.00
	31		J5	125.00	July	1			CR20	750.00
Feb.	28		J11	125.00						
Mar.	31		J17	125.00						
Apr.	30		J25	125.00						
May	31		J30	125.00						
June	30		J36	125.00						
July	31		J41	125.00						
Aug.	31		J47	125.00						
Sept.	30		J54	125.00						
Oct.	31		J60	125.00						
Nov.	30		J66	125.00						
Dec.	31		J84	125.00						

MORTGAGE INTEREST INCOME

1958								
Jan.	31						J5	125.00
Feb.	28						J11	125.00
Mar.	31						J17	125.00
Apr.	30						J25	125.00
May	31						J30	125.00
June	30						J36	125.00
July	31						J41	125.00
Aug.	31						J47	125.00
Sept.	30						J54	125.00
Oct.	31						J60	125.00
Nov.	30						J66	125.00
Dec.	31						J84	125.00

The balances of these accounts, identical with those of Example 1, are now correct and ready for inclusion in the financial statements of 1958.

In this second example it is to be observed that, at the end of each month, accrued incomes are recognized by the debiting of appropriate accrued income receivable accounts and the crediting of related income accounts. When this income is collected, the cash receipt is credited to the appropriate accrued income receivable account.

As illustrated by the Mortgage Interest Income account, the total of the credits in an income account should be equal to the income *actually earned* in the accounting period under review.

Other examples of accrued incomes are commissions, interest, rent, royalties, and similar items.

The necessity for adjusting entries to care for accrued incomes should be clear because, without such adjustments,

1. incomes of the accounting period would be understated,
2. net income of the period would be understated,
3. the assets of the balance sheet would be understated because of the omission of accrued income receivable, and
4. net worth would be understated.

PROBLEMS

Problem 12–1. On December 1, 1958, a company paid $720.00 as premium on a three-year fire insurance policy on its property. At a later date financial statements were being prepared for the year ended December 31, 1958.

Required

1. What adjusting entry should be made if the disbursement was debited to Insurance Expense?
2. What adjusting entry should be made if the disbursement was debited to Prepaid Insurance Expense?

Problem 12–2. On December 31, 1958, the Office Supplies Expense account of the Carey Sales Company had a balance of $13,846.00. This balance did not include an unpaid bill, dated December 22, 1958, of the Essex Office Supplies Company for miscellaneous office supplies, $1,274.00. These supplies were received by the Carey Sales Company on December 22, 1958; the bill was due for payment in 30 days.

The amount of unused office supplies on hand, December 31, 1958, was $1,120.00.

Required

For purposes of the financial statement for 1958, what adjusting entries should be made with respect to the Office Supplies Expense account?

Problem 12–3. The debit balance of the Salesmen's Commissions account on December 31, 1958, was $17,986.00. This balance did not include commissions of $2,014.00 earned by salesmen on their December sales.

Required

What is the adjusting entry required by the above information?

Problem 12–4. In accordance with the terms of their lease, the monthly rental of the Quality Cleaners was $100.00, payable on the first day of each

month. Payments for the first 9 months had been made. On December 31, 1958, the unpaid and unrecorded rent for October, November, and December was $300.00.

Required

What adjusting entry is required preliminary to the preparation of financial statements for 1958?

Problem 12–5. The General Magazine Company launched a new monthly magazine on October 1, 19__, annual subscription rate $5.00. During October, 11,140 yearly subscriptions were received; in November, 16,400 subscriptions; and in December, 28,180 subscriptions. All subscription collections, $278,600.00, were credited to Subscription Sales. October subscriptions began with the October issue of the magazine, November subscriptions with the November issue, and so on.

Required

1. What adjusting entry should be made, December 31, 19__?
2. What amounts will appear in the statement of income for the three months ending with December 31, 19__, and in the balance sheet, December 31, 19__?

Problem 12–6. On December 31, 1958, the Rent Income account of the lessor of the premises occupied by the Quality Cleaners (see Problem 12–4) had a balance of $900.00, representing the collection of rent for the first 9 months of 1958. The amount of unpaid and unrecorded rent was $300.00.

Required

What adjusting entry is required preliminary to the preparation of financial statements for 1958?

Problem 12–7. On November 30, 1958, a finance company loaned $9,700.00 cash to a client and received in exchange a six months', non-interest-bearing note for $10,000.00. The discount rate was 6%.

Required

1. What entry should be made to record the loan?
2. What adjusting entry should be made, December 31, 1958?
3. What entries should be made on the books of the borrower?

Problem 12–8. The following condensed and informal financial statements for the year ended December 31, 19__, were prepared by the bookkeeper of the E. A. Parker Company:

STATEMENT OF INCOME

Sales		$58,726.00
Cost of Sales		32,401.00
Gross Profit		$26,325.00
General Expense	$ 2,416.00	
Insurance Expense	414.00	
Office Supplies Expense	1,280.00	
Wages and Salaries	16,000.00	20,110.00
Net Income		$ 6,215.00

BALANCE SHEET

Assets

Cash	$18,748.00
Accounts Receivable	7,041.00
Inventory	14,211.00
Sundry Fixed Assets	20,000.00
	$60,000.00

Equities

Accounts Payable	$ 5,000.00
E. A. Parker, Capital	55,000.00
	$60,000.00

You find that the following items were not considered in the preparation of the above statements:

Wages owed but not yet due for payment	$187.00
Stationery and supplies on hand	30.00
Prepaid insurance	214.00
Accrued property taxes payable for the year 19__	750.00
Estimated uncollectible accounts receivable	142.00

Required

1. What adjusting entries are necessary?
2. Prepare adjusted financial statements.

Problem 12–9. Following are certain transactions of Dean & Co., Inc., for the dates indicated:

19__

Nov. 1 Paid rent for 12 months in advance, $6,000.00.

15 Paid a premium on a 3-year fire insurance policy, $648.00.

30 Interest of $50.00 is earned in November on a note receivable of $10,000.00 signed by A. E. Huston.

Dec. 1 Cash is received from A. E. Huston in payment of November interest on his note payable of $10,000.00.

Funds are borrowed from the First National Bank on a $10,000.00, noninterest-bearing note for 120 days. The bank rate is 6% annually, interest payable in advance.

15 A check for $100.00 is received from A. E. Huston in payment of interest on his note for the months of December and January.

31 Warehouse space is sublet to Quinn & Quinn for a period of 3 months. A check for $300.00 is received as full payment of rent for the months of January, February, and March.

Required

1. What are the proper entries to record the above transactions? Assume that the books of Dean & Co., Inc., are kept on the monthly accrual basis.
2. What entries should be made on November 30 and December 31?

3. For the two months ended December 31, 19__, what are the balances of the following accounts—Insurance Expense, Interest Expense, Interest Income, Rent Expense, Rent Income?

Problem 12–10. On December 31, 1957, the balance sheet of Barrett & Company included the following accounts:

Wage Advances to Employees (asset)	$ 500.00
Wages Payable	6,041.00

During 1958 the company disbursed $108,778.00 in payment of wages. On December 31, 1958, the balance sheet showed

Wages Payable	$12,088.00

There were no outstanding wage advances on this date.

Required

What was the amount of wages expense for 1958?

Problem 12–11. A balance sheet at the end of 1957 showed

Accrued Interest Receivable	$2,350.00
Deferred Interest Income	680.00

During 1958 interest collected in cash amounted to $5,140.00. The balance sheet, December 31, 1958, showed

Accrued Interest Receivable	$1,820.00
Deferred Interest Income	980.00

Required

What was the amount of interest income on the statement of income for 1958?

Chapter 13 ADJUSTING ENTRIES (Continued)

The recording of monthly adjusting entries on the books is bookkeeping of especial usefulness to businesses whose managements

1. find it desirable for the balances of income and expense accounts to be kept continuously up-to-date, i.e., to be cumulatively correct for the year to date;
2. require frequent financial statements as, for example, monthly.

Income statements, for example, are used to measure the effectiveness of the current operations of a business for a month or for the year to date, as well as to make or adjust plans of the business relating to its future operations.

Distribution Records

In order to facilitate the placement of monthly adjusting entries *on the books* of a business (as illustrated on pages 239, 243, 247, and 250), it is often worth while to maintain auxiliary "distribution records." One example of this type of supporting record is illustrated on page 256.

Based on this distribution register—collections having been credited to Unearned Rent Income—the monthly entries of John E. Miller, Inc., would be

1958			
Oct. 31	Unearned Rent Income	1,100.00	
	Rent Income		1,100.00
	To record accrued rent income earned in October.		
Nov. 30	Unearned Rent Income	1,600.00	
	Rent Income		1,600.00
	To record accrued rent income earned in November.		
Dec. 31	Unearned Rent Income	2,255.00	
	Rent Income		2,255.00
	To record accrued rent income earned in December.		

In similar manner, the entries for 1959 would be based upon the monthly column totals of the 1959 lease register. The 1959 lease register,

Example

The various leases of John E. Miller, Inc., have been recorded as follows:

1958

LEASE REGISTER

DATE OF LEASE		LESSEE	TERM	AMOUNT RECEIVED IN ADVANCE	DISTRIBUTION OF INCOME												BALANCE CARRIED FORWARD TO 1959
					Jan.	*Feb.*	*Mar.*	*Apr.*	*May*	*June*	*July*	*Aug.*	*Sept.*	*Oct.*	*Nov.*	*Dec.*	
1958																	
Oct.	1	Blue & White Chain Stores	12 mo.	12,000.00										1,000.00	1,000.00	1,000.00	9,000.00
	15	A. E. Webb	6 "	600.00										100.00	100.00	100.00	300.00
	31	Bishop & Son	12 "	3,600.00											300.00	300.00	3,000.00
Nov.	1	Corley's Haberdashery	3 "	600.00											200.00	200.00	200.00
	30	Ching's Laundry	3 "	90.00												30.00	60.00
Dec.	1	Fortney's Business College	12 "	6,000.00												500.00	5,500.00
	15	Lindsay's Drugstore	12 "	3,000.00												125.00	2,875.00
				25,890.00										1,100.00	1,600.00	2,255.00	20,935.00

of course, would be opened by bringing forward the unearned balance of $20,935.00 as shown in the last column of the 1958 lease register.

Distribution records are also often used in distributing such values as prepaid insurance, property taxes, accrued interest, or subscription income to the months of the accounting year.

Other Unrecorded Expenses and Incomes

EXPENSES Invoices for expenses are usually debited to expense accounts when they are paid. At the end of an accounting period, certain expense bills of a business may be unpaid and unrecorded. Utility bills for gas, electricity, telephone, and water are common examples. In order to bring such expenses into the accounts of the period to which they relate, and in order to record the liability which they represent, an adjusting entry for unpaid and unrecorded expense bills would be made as follows:

Expense Accounts (detailed)	xxx xx	
Accounts *or* Expenses Payable		xxx xx
To record unpaid and unrecorded expense bills.		

This entry should be made monthly if it is the practice of a business to prepare monthly financial statements.

A similar adjusting entry should be made for unpaid and unrecorded bills representing purchases of merchandise and fixed assets.

Adjusting entries of the kind illustrated above are not required in those cases where a business has expanded its purchases book to include purchases of all kinds—purchases of merchandise, sundry assets, and expense supplies and services. Under these accounting circumstances, bills from vendors are recorded as soon as the goods have been received and the bills approved. This accounting is discussed in detail in Chapter 21, "The Voucher System, Check Register, and Petty Cash."

INCOME TAXES Income taxes are levied on a calendar or fiscal year basis. They are not an *expense* of operations but, rather, a coerced appropriation of net income in favor of the state or federal government, the cash payment of the liability being obligatory. When financial statements for a given year are to be prepared, income taxes for a corporation should be recorded by an entry of the following type:

Provision for Income Taxes	xxx xx	
Income Taxes Payable		xxx xx
To record estimated liability for income taxes for year 19__.		

On the corporate statement of income, the provision for income taxes should be shown as follows:

Net Income before Income Taxes	$xxx xx
Less Provision for Income Taxes	xxx xx
Net Income	$xxx xx

INCOMES A business may also have certain unrecorded incomes such as those for services rendered but not billed. Such incomes, if any, would be recognized through the following adjusting entry:

Income (or Accounts) Receivable	xxx xx	
Income Accounts (detailed)		xxx xx
To record uncollected and unrecorded service fees.		

Depreciation Expense

Fixed assets, like buildings, machinery, and equipment, do not last forever. They have definite lives. When they are no longer *useful*, the investment in them is gone. The investment has been used up in the operations of business, i.e., as the services of a fixed asset are used up, the investment in the asset is *converted into expense*. The name of this expense is *depreciation expense*. Whether a fixed asset has been used, or is expected to be used, for five or twenty-five years is not as important as the fact that the investment in the asset converts into an expense applicable to this five- or twenty-five-year period of life and that

> since this expense is one of the costs of all the income earned over the useful life of a fixed asset,
> a part of this expense applies to each of the years of useful life. This annual depreciation expense is one of the costs of the income earned in each of these years.

It is common practice to spread depreciation expense equally over the years constituting the useful life of a depreciable fixed asset.

By way of emphasis, it may again be stated that *depreciation expense* is the decline in the dollar value of a fixed asset—dollar value being measured in terms of original cost—which occurs because of shrinkage in the amount of services receivable from the asset. As the services of a fixed asset are used up, a proportionate amount of the original investment converts into expense. The dollar value of a delivery truck, for example, declines as the services of the truck are used up. By dollar value here is meant not market value but going-concern value, i.e., services receivable expressed in terms of the owner's original dollar investment in the asset.

Depreciation expense is one of the inescapable costs involved in the ownership of fixed assets. It is also one of the inescapable costs involved in the *operations* of a business which owns fixed assets. If the periodic net income of a business is to be stated fairly and if the balance sheet at the end of an accounting period is to be stated fairly, the accounts of the business must be adjusted preliminary to the preparation of these statements in order to recognize

1. the estimated depreciation expense for the period, and
2. the lessened book value of the depreciable fixed asset.

This adjustment is illustrated in the following example.

Example

On January 1, 1958, a business purchased five new automobiles for the use of its traveling salesmen at a cost of $15,000.00. These automobiles were estimated to have useful commercial lives of four years each. It was also estimated that the consumption of service would be about the same in each of these years. By December 31, 1958, therefore, the automobiles had depreciated 25% in value, or $3,750.00. And their net accounting value was reduced to $15,000.00 − $3,750.00 = $11,250.00.

In order to record the year's estimated depreciation expense of $3,750.00 and in order to recognize the reduced value of the asset, $11,250.00, the following adjusting entry might be made:

Depreciation Expense—Automobiles	3,750.00	
Automobiles		3,750.00
To record depreciation expense on salesmen's automobiles for the year ended December 31, 1958.		

Although this entry records the year's depreciation expense and the reduction in the value of the fixed asset, it is general accounting practice to place the *credit* value of a depreciation entry in a *separate* account called Allowance for Depreciation (also often called Reserve for Depreciation). Accordingly, the adjusting entry for depreciation expense should be

Depreciation Expense—Automobiles	3,750.00	
Allowance for Depreciation—Automobiles		3,750.00
To record depreciation expense on salesmen's automobiles for the year ended December 31, 1958.		

The Depreciation Expense—Automobiles account, with its balance of $3,750.00, is now ready for inclusion as one of the operating expenses in the statement of income for 1958.

The five automobiles would appear on the books as follows:

AUTOMOBILES		ALLOWANCE FOR DEPRECIATION—AUTOMOBILES	
15,000.00			3,750.00

These two accounts would appear as one of the fixed assets of the balance sheet, December 31, 1958, thus:

Automobiles	$15,000.00	
Less Allowance for Depreciation	3,750.00	$11,250.00

An allowance for depreciation account is a valuation account for the fixed asset to which it relates. The account is an estimate of the cumulative amount of capital (i.e., capital originally invested in the fixed asset) used up because of fixed-asset services consumed in the production of income.

A separate allowance for depreciation account should be maintained for each group of depreciable fixed assets because of differences in the character and in the rates of depreciation of these groups. There will be an allowance for depreciation account for automobiles, one for buildings, one for machinery, and so on.

An allowance for depreciation account should carry a balance as long as the depreciable asset to which it is related is carried in the balance sheet. The balance of a particular allowance for depreciation account should not be closed until the depreciable asset related to it is retired or sold.

Adjusting entries to bring depreciation accounts up to date should be made whenever financial statements are to be prepared. Some businesses find it worth while to record adjusting entries for depreciation monthly. Whatever the bookkeeping method may be, adjusting entries to recognize accrued depreciation are very important because without such adjustment

1. the expenses of an accounting period would be understated,
2. the net income of the period would be overstated,
3. The balance sheet would be incorrect because fixed assets would be overvalued, and
4. net worth would be overstated.

Bad Debts Expense (*also called* Provision for Uncollectible Accounts)

Many businesses have found through experience that accounts receivable are not always 100% collectible. Because of this experience, accounts receivable (and often notes receivable) are often considered to have an accounting value something less than their contract value. The cash value of the receivables of a business is their contract value *less* the amount of accounts receivable estimated as uncollectible. The amount of uncollectible accounts receivable can be closely *estimated* as follows:

1. As a fair percentage of the net sales of an accounting period, the percentage generally being established upon the basis of past experience. This method is widely used.

In principle, the percentage should be applied against the credit sales of a business. Where the ratio of credit sales to cash sales varies significantly from period to period, it is important to apply the bad debts percentage against the credit sales of a business only.

2. As a percentage, based on experience, of the accounts receivable at the end of an accounting period. This method is not ordinarily to be recommended because of certain inaccuracies which may result when a fixed percentage is applied annually against fluctuating periodic values for accounts receivable.

3. As the result of careful classification and analysis of past-due accounts receivable. This method, although excellent, is somewhat time consuming and relatively costly, especially when hundreds or thousands of customers' accounts are involved.

The amount of estimated uncollectible accounts receivable is one of the costs incurred in operating a business. It is an expense chargeable against the income of the period in which the accounts receivable were created. In order to record the bad debts expense in this period and also—for purposes of the balance sheet—to evaluate the accounts receivable in terms of the total collections expected on them, the following adjusting entry should be made preliminary to the preparation of financial statements:

Bad Debts Expense	xxx xx	
Allowance for Bad Debts		xxx xx
To record estimated bad debts expense for _____.		

The credit value of this entry represents a reduction in the value of the asset accounts receivable. The Accounts Receivable account, however, cannot be credited immediately because, at the time of the entry above, it is not known which particular customers' accounts in the subsidiary ledger are uncollectible. Hence, the credit value is recorded temporarily in a separate account called Allowance for Bad Debts (also called Allowance for Uncollectible Accounts or Reserve for Bad Debts), the credit to remain in this temporary account until particular customers' accounts have been determined to be uncollectible. As specific accounts receivable are determined to be worthless and collection attempts abandoned, they are removed from the accounts of a business by the following entry:

Allowance for Bad Debts	xxx xx	
Accounts Receivable		xxx xx
To write off the following customers' accounts as uncollectible:		
John Doe	$xxx xx	
Richard Roe	xxx xx	
	$xxx xx	

Individual accounts receivable, arising from the sales of a current accounting year and proved to be worthless within that year, should be removed from the accounts of a business by a similar entry. This write-off is made in anticipation of the Allowance for Bad Debts account to be set up at the end of the accounting year (or, alternatively, monthly). Before the credit to the allowance account is recorded, it is quite possible, in consequence, for the Allowance for Bad Debts account to have, temporarily, a debit balance.

Example

During 1958 the Jordan-Field Company, a department store, had sales of $1,000,000.00 and collections on these sales of $800,000.00. According to the past experience of the store, the average annual loss from uncollectible accounts receivable was about 2% of net sales. Thus, on December 31, 1958, the following entry would be made:

Bad Debts Expense	20,000.00	
Allowance for Bad Debts		20,000.00
To record estimated bad debts expense for 1958:		
2% × $1,000,000.00 (sales) = $20,000.00.		

During the year, customers' accounts (arising out of 1958 sales) of $15,000.00 have become uncollectible. These worthless accounts would be written off by the following entry, responsibly approved:

Allowance for Bad Debts	15,000.00	
Accounts Receivable		15,000.00
To write off the following customers' accounts as uncollectible:		
. . . . . (detail)		

At this point the three accounts of immediate interest would be as follows:

BAD DEBTS EXPENSE		ACCOUNTS RECEIVABLE		ALLOWANCE FOR BAD DEBTS	
20,000.00		1,000,000.00	800,000.00	15,000.00	20,000.00
			15,000.00		

The Bad Debts Expense account, with its balance of $20,000.00, is now ready for inclusion as one of the operating expenses in the statement of income for 1958. And the Accounts Receivable account and its related Allowance for Bad Debts account are ready for inclusion as one of the current assets of the balance sheet, December 31, 1958, thus:

Accounts Receivable	$185,000.00	
Less Allowance for Bad Debts	5,000.00	$180,000.00

The Allowance for Bad Debts account thus functions as a *valuation account* for accounts receivable.

With respect to the first entry in this example, it should be understood that while an annual rate of 2% may represent the average rate of loss over a period of years, it is possible that this rate might not be applicable to the accounts of a specific year. The correct percentage for the year might be more or less than 2%. This statement is intended to emphasize the fact that the yearly provision for bad debts expense is not purely a matter of routine determination. Judgment should always govern the decision establishing the amount of the provision for bad debts expense. The test in every case should be this: Is the amount of the provision, as appraised from all information available, an adequate measure of the loss to be sustained because of accounts receivable proving worthless? Is the value for accounts receivable on the end-of-the-period balance sheet a fair measure of the amount of cash which will be realized by collections?

Allowance for Bad Debts

An Allowance for Bad Debts account (or Allowance for Uncollectible Accounts) is a valuation account for the accounts receivable of a business. As a deduction from accounts receivable, the value remaining—$180,000.00 in the preceding example—is the cash valuation placed on the outstanding accounts receivable as of the date of the balance sheet.

The credit of $20,000.00 made to the Allowance for Bad Debts account in this example is an *estimate* of the amount of uncollectible accounts receivable arising out of 1958 sales. Subsequent to December, 1958, the actual loss will be determined to be more or less than $20,000.00. The difference between the amount of actual expense and the estimated expense of $20,000.00 is the amount by which the original estimate was wrong. In order to correct the 1958 provision and to avoid any possible distortion of the value of outstanding accounts receivable on December 31, 1959, the difference in question—if significant—should be recognized by adjusting the balance of the Allowance for Bad Debts account and by debiting or crediting an expense or income account of suitable title. If the difference is not significant, there is no practical objection to its retention in the Allowance for Bad Debts account—thus avoiding an adjusting entry. This is common practice.

If the difference is large, the 1958 provision is shown to have been inadequate or excessive, with corresponding distortion given to the values of the 1958 financial statements. Such errors are particularly undesirable.

Adjusting entries to bring the accounting values for accounts receivable and Bad Debts Expense up-to-date should be made preliminary to the preparation of financial statements. Some businesses find it worth while to record adjusting entries for bad debts expense monthly. Whatever the bookkeeping method of a business may be, adjusting entries to recognize the expense of bad debts are very important because without such adjustment

1. The expenses of an accounting period would be understated,
2. The net income of the period would be overstated,
3. The balance sheet would be inaccurate because accounts receivable would be overvalued, and
4. Net worth would be overstated.

Collections on Accounts Receivable Once Written Off

If a customer's account, written off in a past accounting period, is partially or fully collected in a current accounting period, the collection should be recorded by the following entries:

Accounts Receivable—L. L. Dutton	xxx xx	
Bad Debts Collected		xxx xx
To reinstate the account receivable of L. L. Dutton which was written off as uncollectible on August 29, 19__.		
Cash	xxx xx	
Accounts Receivable—L. L. Dutton		xxx xx
To record collection of Dutton's account.		

The collection is handled through accounts receivable in order to have the account of L. L. Dutton complete as to its historical detail.

The Bad Debts Collected account would appear on the statement of income as special income of the period of collection.

"Cash" and "Accrual" Accounting

INTRODUCTION The discussion of the preceding pages has steadily emphasized the importance of having the statement of income reflect all incomes earned in an accounting period and all costs incurred in the earning of these incomes. This done, the statement of income will then be *fairly* stated and the balance sheet will *fairly* present the financial condition of the business at the end of the income period.

When all incomes and costs have been so included, the statement of income reflects the "accrual" method of accounting. This method is simply that accounting which includes in a given accounting period all revenues earned and all matching costs consumed in that period.

Two methods of accounting are used by businessmen for the calculation of the net incomes of their businesses: (1) the cash method of accounting, and (2) the accrual method of accounting. These methods are summarized in the discussion below.

CASH ACCOUNTING The books of a business are said to be maintained—and financial statements prepared—on a "cash basis" when expenses are recorded as costs of the periods in which the expenses are paid, and when incomes are recorded as revenues of the periods in which the incomes are collected. In theory, accrued and deferred items are not recognized under "cash" accounting. They are disregarded in statements of income and in balance sheets. In theory, further, a disbursement to pay for an asset which will sooner or later be used up in operations is an expense of the period in which payment for the asset is made.

In practice, however, the application of the "cash" method of accounting is generally not so severe. In the interest of greater accuracy in determining the net income of a business for an accounting period, the cash method is usually modified to permit the inclusion of

Inventories
Sales and purchases of merchandise on terms of credit

A provision for bad debts expense (consisting *only* of *known* worthless accounts receivable)
A provision for depreciation expense

Even with this modification of the cash method, it is usual to continue to disregard *other* accrued and deferred items.

Although the factor of simplicity weighs heavily in its favor, the cash method of accounting is unsatisfactory because, for ordinary commercial accounting purposes, it usually does not result in a proper determination of net income for an accounting period. The reason is that the cash method of accounting fails to allocate properly revenues and revenue costs to the periods to which they apply.

ACCRUAL ACCOUNTING As stated above, accrual accounting is that accounting which includes in a given accounting period all revenues earned, and all costs consumed, in that period.

For the ordinary private commercial business, accrual accounting is generally to be preferred over cash accounting. If the net income of a business is to be determined, reported upon, and interpreted properly with any degree of accuracy, it should be clear that the accrual basis of accounting must be used for the determination of net income. The method of accrual accounting is generally employed in actual business practice. It is the method exclusively used in this book.

The accounts of a business are converted to an "accrual basis" through the use of various "adjusting entries." When adjusting entries have been made effective, the accounts of a business are ready for inclusion in the financial statements. As an important aid in this process, work sheets—as discussed and illustrated in Chapters 14 and 15—will be found most useful.

PROBLEMS

Problem 13–1. What adjusting entries should be made on December 31, 19__, to care for the following unrelated and unrecorded data?

1. Interest accrued on notes receivable, $300.00.
2. Interest accrued on notes payable, $100.00.
3. Interest collected and credited to the Interest Income account, but not yet earned, $200.00.
4. Rent collected in December for the first 3 months of the new year, $900.00. This collection was credited to the Rent Income account.
5. Rent due from one of our tenants for the months of November and December, $300.00. This rent is uncollected.
6. Of the balance in the Insurance Expense account, unexpired insurance premiums amount to $1,000.00.
7. Uncollectible accounts receivable are estimated at 1% of the year's net sales of $500,000.00.

8. The account receivable of Carl F. Glenn is uncollectible, $374.18.
9. The year's depreciation expense on delivery equipment is estimated at $2,000.00.
10. The amount of the accrued payroll for the office and sales department is $9,200.00.
11. A building, costing $100,000.00, was estimated to depreciate 4% annually. No depreciation expense has been recorded for the current year.
12. Unpaid and unrecorded property taxes amount to $2,300.00.
13. Advertising supplies on hand amount to $300.00. All bills for advertising supplies have been debited to Advertising Expense as incurred.
14. A commission of $900.00 is due one of our salesmen on a special order obtained by him. The merchandise was shipped and billed to the customer on December 30, 19__.
15. A bill, dated December 27, 19__, from Springfield Motors, Inc., covering repairs to automobiles used in the sales department, is unpaid, $224.11.
16. A note for $1,032.24 has been received from Harry J. Reed, a customer. This note covered a past-due account receivable of $1,012.00 and interest for November and December of $10.12, as well as interest in advance for January and February for an additional $10.12.
17. Shipping records disclose that a shipment of merchandise was made to Kearney & Harrison, Inc., on December 31 although the sales invoice was actually recorded in the sales book on January 2 of the new year, $3,400.00.

Problem 13–2. The Easton Lumber Company took out the following fire insurance policies during the past calendar year:

Date	*Policy Number*	*Company*	*Term*	*Premium Paid*
Jan. 1	4112	Hannover Fire Insurance Company	3 years	$1,800.00
Apr. 1	19478	Rossia Insurance Company	1 year	432.00
Aug. 15	88068	Fidelity-Phenix Fire Insurance Co.	3 years	2,520.00

Required

1. Prepare an insurance distribution record.
2. All payments of insurance premiums have been debited to Prepaid Insurance. Assuming insurance expense to be recorded monthly, what are the monthly insurance entries for the year?

Problem 13–3. During 1956 *The Companion Digest*, a monthly magazine, received the following twelve-month subscriptions:

January	$ 5,004.00	May	$16,800.00	September	$12,000.00
February	7,080.00	June	12,000.00	October	14,400.00
March	18,000.00	July	9,000.00	November	11,028.00
April	10,200.00	August	10,440.00	December	20,640.00

All collections on subscriptions were credited to Unearned Subscription Income.

For the purpose of this problem, assume that all subscriptions were received on the first day of each month, that magazines were immediately placed in the mails, and that entries are placed on the books *monthly* to record the subscription income earned each month.

Required

1. Prepare a distribution register suitable to the needs of *The Companion Digest.*
2. What are the entries that should be made to record the earned subscription income of each month?

Problem 13–4. During the past calendar year, John R. Alexander received the following four notes receivable:

Debtor	*Dated*	*Amount*	*With Interest at*	*Term*
George V. Allen	Jan. 1	$10,000.00	6%	6 months
Edward A. Weiss	Feb. 28	40,800.00	5%	12 months
Robert E. Rainey	Apr. 15	30,000.00	8%	10 months
Thomas A. Murray	July 15	20,000.00	4½%	8 months

Required

1. Draw up a distribution register for the monthly recording of interest earned on notes receivable. This register should be for the past calendar year only.
2. What are the entries that should be made to record the interest income of each month? The books are maintained on the monthly accrual basis of accounting.
3. What entry should be made when the Allen note is collected on July 1?

Problem 13–5. On December 31, 1958, the Advertising Expense account of the Grand Department Store had a balance of $16,662.00 representing disbursements made for advertising during the year.

Bills were on hand for newspaper advertising in December, $3,338.00. These bills, unrecorded, were due for payment on January 10, 1959.

Required

What adjusting entry is required preliminary to the preparation of financial statements?

Problem 13–6. On January 1, 1958, the Advertising Expense account of the Irvington Stores Company had no balance. During January, 1959, various advertising bills of December, 1958, were paid and debited to Advertising Expense, $34,260.00. These bills were not included in the financial statements of 1958 nor were they placed on the books for that year.

During 1959 various advertising bills of that year were paid, amounting to $151,420.00. On December 31, 1959, there were unrecorded and unpaid advertising bills of $11,160.00.

Required

How should the company's advertising costs appear in the statement of income for 1959?

Problem 13–7. On December 31, 19__, the balance of the Sales account of the Lincoln Hardware Company was made up of the following items:

Wholesale merchandise sales	$190,000.00
Merchandise shipped December 31, 19__, on sight draft order bill of lading as mutually agreed; the draft was accepted January 7, 19__	10,000.00
Retail merchandise sales	125,000.00
2% sales tax collections on December sales and which must be remitted to the state treasurer in January	500.00
	$325,500.00

Required

What adjusting entries are required by the above information?

Problem 13–8. On January 1, 1958, the Superior Bakeries, Inc., purchased a building for $100,000.00, and land, $15,000.00. It was estimated that the building would have a probable useful life of 25 years with depreciation estimated at 4% annually.

On January 1, 1959, 7 motor trucks were purchased at a cost of $20,000.00. Depreciation expense was estimated at 25% annually.

Required

1. What is the depreciation entry for 1958?
2. What are the depreciation entries for 1959?
3. How should the fixed assets appear on the balance sheet of December 31, 1959?

Problem 13–9. Warren B. Taylor began business on January 1, 1958. On December 31, 1958, his ledger included the following accounts:

Accounts Receivable	$71,224.90	
Sales		$334,741.82

Bad debts expense for 1958 was estimated at 4% of net sales.

In 1959, collections on 1958 accounts receivable amounted to $65,362.73, and $5,862.17 of 1958 accounts receivable were uncollectible.

Sales in 1959 amounted to $368,326.39. Collections on 1959 sales amounted to $288,044.90, and $1,214.17 of 1959 accounts receivable were determined to be worthless.

Bad debts expense for 1959 was estimated at 3% of net sales.

Required

1. What are the entries that should be made in 1958 and 1959 affecting the Bad Debts Expense account and the Allowance for Bad Debts account?
2. How should accounts receivable appear on the balance sheets of December 31, 1958, and December 31, 1959?

Problem 13–10. Following are certain transactions of the Safeway Furniture Company on the dates indicated:

December 31, 1956: Bad debts expense for the year 1956 is estimated at 5% of the year's net sales of $100,000.00.

July 14, 1957: The account receivable with Reed & Banes, $500.00, is written off as uncollectible (a 1956 account receivable).

July 31, 1957: The account receivable with Frank A. McCall, $400.00, is written off because this customer is in bankruptcy (a 1957 account receivable).

December 31, 1957: After giving effect to write-offs of worthless 1956 accounts receivable, the credit balance remaining in the Allowance for Bad Debts (1956) is $201.00. There are no further accounts receivable of 1956 to be collected. All accounts receivable now on the books are from 1957 sales. The bad debts expense for 1957 is estimated at 4½% of the year's net sales of $110,000.00.

July 1, 1959: A check for $500.00 is received from Reed & Banes in payment of that account. This account receivable was written off July 14, 1957.

Required

What entries should be made on each of the above dates?

Problem 13–11. The following accounts are taken from the ledger, before adjustment, of the Prentice Hardware Company on December 31, 1958:

Accounts Receivable	$100,000.00	
Bad Debts Expense	0.00	
Allowance for Bad Debts		$ 16,000.00
Sales		600,000.00

All the outstanding accounts receivable are from sales made in 1958. The bad debts expense for 1958 is estimated at 2% of sales.

Required

1. What is the explanation for the credit balance of $16,000.00 in the Allowance for Bad Debts account?
2. What adjusting entries are required by the above information?
3. How should accounts receivable appear on the balance sheet of December 31, 1958?

Problem 13–12. On December 31, 19__, after the adjusting entry for bad debts expense had been posted, the balances of four accounts were

Accounts Receivable	$112,000.00	
Allowance for Bad Debts		$ 18,642.00
Sales		800,000.00
Bad Debts Expense	16,000.00	

Bad debts expense for the year was estimated at 2% of sales, or $16,000.00.

The Accounts Receivable account includes accounts from the sales of the current year only. Of these accounts receivable, accounts of $4,284.00 are worthless and should be written off.

Required

1. Explain why the balance in the Allowance for Bad Debts account is larger than the balance in the Bad Debts Expense account.
2. What will be the amount of bad debts expense in the statement of income for the year?
3. What will be the amount of the allowance for bad debts in the balance sheet?
4. What additional entries should be made to adjust the accounts?

Problem 13–13. The condensed statement of income of the business of John A. Bearly for the year ended December 31, 1958, was

Sales	$86,014.22
Cost of Sales	48,229.81
Gross Profit	$37,784.41
Selling and General Expenses	30,770.19
Net Profit from Operations	$ 7,014.22
Miscellaneous Income	1,512.87
Net Income	$ 8,527.09

This statement of income was prepared under the "cash method" of accounting in which all accrued and deferred values were disregarded. Mr. Bearly wishes to know what the net income of his business would have been if his statement of income had been prepared according to the accrual method of accounting. For this purpose the following information is pertinent:

	December 31, 1957	*December 31, 1958*
Prepaid expenses	$1,042.88	$ 732.40
Accrued expenses payable	3,180.99	4,009.72
Deferred miscellaneous income	782.53	812.67
Accrued income receivable	101.22	312.04

Required

1. Statement of income for the year ended December 31, 1958, under the accrual method of accounting.

2. Assuming that, in the future, the books of the business of Mr. Bearly are to be operated under the accrual method of accounting, what adjusting entry or entries should be placed on the books, January 1, 1959?

Problem 13–14. From the following information construct statements of income for the business of James E. Henderson for the year ended December 31, 1958, under (a) accrual accounting, and (b) cash accounting (as generally followed in business practice and as described on page 264):

Cash received from customers in 1958	$60,001.00
Sales invoices written for merchandise delivered in 1958	76,024.00
Purchases made on account in 1958	60,927.00
Payments made on accounts payable in 1958	50,704.00
Expenses paid in 1958	15,804.00

	December 31, 1957	*December 31, 1958*
Unpaid expenses	$ 3,310.00	$ 1,211.00
Prepaid expenses	684.00	1,429.00
Merchandise inventory	26,101.00	30,608.00

Problem 13–15. The following information constitutes a condensed description of the business of Leslie J. Stimson for two successive years:

	1st Year	*2d Year*
Sales (all credit)	$38,000.00	$50,000.00
Accounts receivable found worthless	500.00	3,500.00
Wages and salaries paid	8,000.00	11,000.00
Fixed assets purchased on credit during the year. For the purpose of this problem, assume these purchases to have been made on January 1 of each year	1,000.00	2,000.00
Cash disbursed in partial payment of fixed assets	700.00	1,800.00
Cash received from customers	32,000.00	46,250.00
Cash interest received on bonds owned		300.00
Property taxes paid	200.00	
Miscellaneous expenses paid	3,000.00	7,000.00
On December 31 of each year there existed:		
Accrued interest on bonds owned	300.00	
Accrued wages and salaries	1,000.00	200.00
Accrued property taxes		300.00
Accrued miscellaneous expenses	1,500.00	700.00

Mr. Stimson ordinarily operated on the assumption that 5% of his credit sales would not be collected.

Of the miscellaneous expenses paid in the second year, $500.00 were expenses applicable to the next succeeding accounting period.

Fixed assets were estimated to depreciate at the annual rate of 10%.

Cost of sales may be considered as 60% of sales.

Required

What is the net income of Mr. Stimson for each year under the accrual method of accounting? Under cash accounting (as generally followed in business practice and as described on page 264)? Prepare four income statements as your solution to this problem.

Chapter 14 THE WORK SHEET

The preparation of annual and interim financial statements and the work of recording adjusting and closing entries at the end of an accounting year are facilitated by the use of a work sheet or, as it is alternatively called, a working paper. This is especially true if there are many accounts involved and many adjusting entries. The work sheet, although very useful, is not a part of the permanent, formal accounting records of a business.

Purpose of the Work Sheet

The work sheet

1. facilitates the preparation of annual and interim financial statements;
2. permits the net income or net loss of a business for a given period of time to be determined quickly and accurately without the formality or necessity of placing adjusting entries on the books of a business, the results of the period appearing on a single work sheet; and
3. serves as a useful guide when adjusting entries are to be placed on the books of a business at the end of its fiscal year.

Illustrations of Completed Work Sheets

The ten-column form of work sheet is illustrated by Example 1 on page 275. The twelve-column form of work sheet is illustrated by Example 2 and Example 3 on pages 276 and 280, respectively. The columnar headings of each form show the function of each pair of columns. These headings, too, indicate the procedures to be followed in preparing the work sheet.

The first two examples illustrate simple work sheets as well as a condensed statement of income. The third example illustrates a more complex work sheet. It also illustrates, fully, the financial statements and the formal bookkeeping entries to be recorded on the books of a business after the work sheet has been completed.

Form of the Work Sheet

In order to provide for adjusting entries, the work sheet forms introduced in Chapter 6 (pages 95 and 96) require the addition of a pair of columns to care for these entries. The work sheet then may assume the following forms:

Eight-column form

ACCOUNTS	TRIAL BALANCE		ADJUSTMENTS		PROFIT AND LOSS		BALANCE SHEET	
	Dr.	*Cr.*	*Dr.*	*Cr.*	*Dr.*	*Cr.*	*Dr.*	*Cr.*

Ten-column form

ACCOUNTS	TRIAL BALANCE		ADJUSTMENTS		TRIAL BALANCE AFTER ADJUSTMENTS		PROFIT AND LOSS		BALANCE SHEET	
	Dr.	*Cr.*	*Dr.*	*Cr.*	*Dr.*	*Cr.*	*Dr.*	*Cr.*	*Dr.*	*Cr.*

Twelve-column form

ACCOUNTS	TRIAL BALANCE		ADJUST-MENTS		TRIAL BALANCE AFTER ADJUSTMENTS		COST OF SALES		PROFIT AND LOSS		BALANCE SHEET	
	Dr.	*Cr.*	*Dr.*	*Cr.*	*Dr.*	*Cr.*	*Dr.*	*Cr.*	*Dr.*	*Cr.*	*Dr.*	*Cr.*

INVENTORIES In Example 1 the new inventory is handled in the same manner as it was on the first work sheet of Chapter 6, page 95. See line 23 of the work sheet on page 275.

In Example 2 and Example 3 the new inventory is handled by the alternative method previously illustrated on page 96. The new inventory is recorded by a debit in the balance sheet columns and a credit in the Cost of Sales columns (see line 4 of Example 2 and line 6 of Example 3). This treatment of the new inventory in the work sheet is an important procedure which should be thoroughly understood.

The work sheets of Example 1 and Example 2 are based on the data of the following problem.

Problem

John L. Davis

Trial Balance, December 31, 1958

Cash	$ 12,100.00	
Accounts Receivable	60,000.00	
Allowance for Losses		$ 100.00
Merchandise Inventory	70,000.00	
Building	100,000.00	
Allowance for Depreciation—Building		6,000.00
Accounts Payable		30,000.00
John L. Davis, Capital		200,000.00
Sales		500,000.00
Purchases	400,000.00	
Insurance Expense	1,000.00	
Property Taxes	4,000.00	
Wages and Salaries	96,000.00	
Rent Income		7,000.00
	$743,100.00	$743,100.00

The following information is available for the purpose of adjusting the accounts of this trial balance:

1. The amount of unexpired insurance expense is $500.00.
2. Accrued rent receivable, $1,000.00.
3. The amount of uncollectible accounts receivable for the year 1958 is estimated at $5,000.00.
4. Depreciation expense for 1958 is estimated at 3% of the cost of the building ($100,000.00), or $3,000.00.
5. Accrued wages and salaries, $4,000.00.
6. Of the rent income already recorded on the books, $500.00 is unearned.
7. Merchandise inventory, December 31, 1958, $100,000.00.

Required

Work sheet, December 31, 1958.

Example 1

John L. Davis

WORK SHEET, DECEMBER 31, 1958

	TRIAL BALANCE		ADJUSTMENTS		TRIAL BALANCE AFTER ADJUSTMENT		PROFIT AND LOSS		BALANCE SHEET	
Cash	12,100.00				12,100.00				12,100.00	
Accounts Receivable	60,000.00				60,000.00				60,000.00	
Allowance for Bad Debts		100.00		(3) 5,000.00		5,100.00				5,100.00
Merchandise Inventory	70,000.00				70,000.00		70,000.00			
Building	100,000.00				100,000.00				100,000.00	
Allowance for Depreciation—Building		6,000.00		(4) 3,000.00		9,000.00				9,000.00
Accounts Payable		30,000.00				30,000.00				30,000.00
John L. Davis, Capital		200,000.00				200,000.00				200,000.00
Sales		500,000.00				500,000.00		500,000.00		
Purchases	400,000.00				400,000.00		400,000.00			
Insurance Expense	1,000.00			(1) 500.00	500.00		500.00			
Taxes	4,000.00				4,000.00		4,000.00			
Wages and Salaries	96,000.00		(5) 4,000.00		100,000.00		100,000.00			
Rent Income		7,000.00	(6) 500.00	(2) 1,000.00		7,500.00		7,500.00		
	743,100.00	743,100.00								
Prepaid Insurance			(1) 500.00		500.00				500.00	
Accrued Rent Receivable			(2) 1,000.00		1,000.00				1,000.00	
Bad Debts Expense			(3) 5,000.00		5,000.00		5,000.00			
Depreciation Expense			(4) 3,000.00		3,000.00		3,000.00			
Wages and Salaries Payable				(5) 4,000.00		4,000.00				4,000.00
Deferred Rent Income				(6) 500.00		500.00				500.00
			14,000.00	14,000.00						
Merchandise Inventory, December 31, 1958								100,000.00	100,000.00	
NET INCOME TO JOHN L. DAVIS, CAPITAL							25,000.00			25,000.00
					756,100.00	756,100.00	607,500.00	607,500.00	273,600.00	273,600.00

Example 2

John L. Davis

WORK SHEET, DECEMBER 31, 1958

	TRIAL BALANCE		ADJUSTMENTS		TRIAL BALANCE AFTER ADJUSTMENT		COST OF SALES		PROFIT AND LOSS		BALANCE SHEET	
Cash	12,100.00				12,100.00						12,100.00	
Accounts Receivable	60,000.00				60,000.00						60,000.00	
Allowance for Losses		100.00		(3) 5,000.00		5,100.00						5,100.00
Merchandise Inventory	70,000.00				70,000.00		70,000.00	100,000.00			100,000.00	
Building	100,000.00				100,000.00						100,000.00	
Allowance for Depreciation—Building		6,000.00		(4) 3,000.00		9,000.00						9,000.00
Accounts Payable		30,000.00				30,000.00						30,000.00
John L. Davis, Capital		200,000.00				200,000.00						200,000.00
Sales		500,000.00				500,000.00				500,000.00		
Purchases	400,000.00				400,000.00		400,000.00					
Insurance Expense	1,000.00			(1) 500.00	500.00				500.00			
Property Taxes	4,000.00				4,000.00				4,000.00			
Wages and Salaries	96,000.00		(5) 4,000.00		100,000.00				100,000.00			
Rent Income		7,000.00	(6) 500.00	(2) 1,000.00		7,500.00				7,500.00		
	743,100.00	743,100.00										
Prepaid Insurance			(1) 500.00		500.00						500.00	
Accrued Rent Receivable			(2) 1,000.00		1,000.00						1,000.00	
Bad Debts Expense			(3) 5,000.00		5,000.00				5,000.00			
Depreciation Expense			(4) 3,000.00		3,000.00				3,000.00			
Wages and Salaries Payable				(5) 4,000.00		4,000.00						4,000.00
Deferred Rent Income				(6) 500.00		500.00						500.00
			14,000.00	14,000.00	756,100.00	756,100.00						
Cost of Sales to Profit and Loss								370,000.00	370,000.00			
							470,000.00	470,000.00				
NET INCOME TO JOHN L. DAVIS, CAPITAL									25,000.00			25,000.00
									507,500.00	507,500.00	273,600.00	273,600.00

STATEMENT OF INCOME The importance of adjusting entries and the work sheet can be noted by observing the statements of income prepared *before* and *after* giving effect to adjusting entries. The two statements of income (condensed) for the business of John L. Davis are as follows:

John L. Davis

STATEMENT OF INCOME FOR 1958

	PREPARED FROM TRIAL BALANCE ON WORK SHEET	
	Before giving effect to adjusting entries	*After* giving effect to adjusting entries
Sales	$500,000.00	$500,000.00
Cost of Sales	370,000.00	370,000.00
Gross Profit	$130,000.00	$130,000.00
Bad Debts Expense		$ 5,000.00
Depreciation Expense		3,000.00
Insurance Expense	$ 1,000.00	500.00
Property Taxes	4,000.00	4,000.00
Wages and Salaries	96,000.00	100,000.00
	$101,000.00	$112,500.00
Net Profit from Operations	$ 29,000.00	$ 17,500.00
Rent Income	7,000.00	7,500.00
Net Income	$ 36,000.00	$ 25,000.00

The work sheet on page 280 (Example 3) is based on the data of the following problem.

Problem

L. A. Roberts

TRIAL BALANCE, DECEMBER 31, 1958

Cash	$ 14,000.00	
Bonds	2,000.00	
Notes Receivable	12,000.00	
Accounts Receivable	28,000.00	
Allowance for Bad Debts		$ 647.00
Merchandise Inventory	24,000.00	
Delivery Equipment	3,600.00	
Allowance for Depreciation—Delivery Equipment		1,700.00
Furniture and Fixtures	8,000.00	
Allowance for Depreciation—Furniture and Fixtures		2,200.00
Store Equipment	4,000.00	
Allowance for Depreciation—Store Equipment		1,000.00
Buildings	30,000.00	
Allowance for Depreciation—Buildings		6,000.00
Land	12,000.00	
Accounts Payable		20,000.00
Notes Payable		25,000.00
L. A. Roberts, Capital		69,000.00
L. A. Roberts, Personal	8,000.00	
Sales		178,350.00
Returned Sales and Allowances	1,600.00	
Sales Discounts	700.00	
Purchases	128,000.00	
Returned Purchases and Allowances		4,000.00
Purchases Discounts		2,400.00
Freight In	1,000.00	
Advertising	6,000.00	
Miscellaneous Selling Expense	1,700.00	
Salesmen's Salaries	11,000.00	
General Expense	5,600.00	
General Salaries	4,000.00	
Insurance Expense	1,200.00	
Property Taxes	2,897.00	
Interest Expense	1,000.00	
	$310,297.00	$310,297.00

The following information is available for adjusting and closing the books:

Merchandise Inventory, December 31, 1958 . . . . . $21,000.00

Depreciation Expense:
Buildings, 4% of cost ($30,000.00)
Delivery Equipment, 20% of cost ($3,600.00)
Furniture and Fixtures, 10% of cost ($8,000.00)
Store Equipment, 10% of cost ($4,000.00)

Bad Debts Expense:
Estimated at 1% of net sales.

Prepaid Expenses:

Advertising expense applicable to 1959	2,000.00
Prepaid insurance	200.00

Accrued Expenses:

General salaries owed but not yet due	100.00
Interest on notes payable	700.00
Salesmen's salaries owed but not yet due	350.00
Property taxes accrued but not yet due	300.00

Deferred Income:
Included in sales are $750.00 in gift certificates sold to customers for use as Christmas gifts to their friends. These certificates are redeemable in merchandise of the recipient's selection.

Accrued Income:

Interest earned on bonds	60.00
Interest earned on notes receivable	300.00

The above information, with one exception, is reflected in the adjustments column of the twelve-column work sheet on page 280. This one exception relates to the manner in which the new inventory of merchandise is recorded: a debit in the balance-sheet columns and a credit in the cost of sales columns (see line 6 of the work sheet).

The net income figure in a work sheet is determined by the excess of credits over debits in the profit and loss columns. Since it is an item of proprietorship, the net income figure is transferred to the credit side of the balance sheet columns. The total of the balance sheet debits should equal the total of the balance sheet credits, thus completing the work sheet. When the work sheet has been completed

1. the statement of income should be prepared from the detailed information appearing in the profit and loss columns of the work sheet;
2. the balance sheet should be prepared from the detailed information appearing in the balance sheet columns of the work sheet; and
3. finally, at the end of the accounting year, the formal adjusting and closing entries should be recorded on the books. In this recording process the work sheet should be of much assistance.

Example 3

L. A.

WORK SHEET

ACCOUNT	TRIAL BALANCE		ADJUSTMENTS		TRIAL AFTER
	Dr.	*Cr.*	*Dr.*	*Cr.*	*Dr.*
Cash	14,000.00				14,000.00
Bonds	2,000.00				2,000.00
Notes Receivable	12,000.00				12,000.00
Accounts Receivable	28,000.00				28,000.00
Allowance for Bad Debts		647.00		(E) 1,753.00	
Merchandise Inventory	24,000.00				24,000.00
Delivery Equipment	3,600.00				3,600.00
Allowance for Depreciation—Delivery Equipment		1,700.00		(B) 720.00	
Furniture and Fixtures	8,000.00				8,000.00
Allowance for Depreciation—Furniture and Fixtures		2,200.00		(C) 800.00	
Store Equipment	4,000.00				4,000.00
Allowance for Depreciation—Store Equipment		1,000.00		(D) 400.00	
Buildings	30,000.00				30,000.00
Allowance for Depreciation—Buildings		6,000.00		(A) 1,200.00	
Land	12,000.00				12,000.00
Accounts Payable		20,000.00			
Notes Payable		25,000.00			
L. A. Roberts, Capital		69,000.00			
L. A. Roberts, Personal	8,000.00				8,000.00
Sales		178,350.00	(L) 750.00		
Returned Sales and Allowances	1,600.00				1,600.00
Sales Discounts	700.00				700.00
Purchases	128,000.00				128,000.00
Returned Purchases and Allowances		4,000.00			
Purchases Discounts		2,400.00			
Freight In	1,000.00				1,000.00
Advertising	6,000.00			(F) 2,000.00	4,000.00
Miscellaneous Selling Expense	1,700.00				1,700.00
Salesmen's Salaries	11,000.00		(J) 350.00		11,350.00
General Expense	5,600.00				5,600.00
General Salaries	4,000.00		(H) 100.00		4,100.00
Insurance Expense	1,200.00			(G) 200.00	1,000.00
Property Taxes	2,897.00		(K) 300.00		3,197.00
Interest Expense	1,000.00		(I) 700.00		1,700.00
	310,297.00	310,297.00			
Depreciation Expense—Buildings			(A) 1,200.00		1,200.00
Depreciation Expense—Delivery Equipment			(B) 720.00		720.00
Depreciation Expense—Furniture and Fixtures			(C) 800.00		800.00
Depreciation Expense—Store Equipment			(D) 400.00		400.00
Bad Debts Expense			(E) 1,753.00		1,753.00
Prepaid Expenses			(F) 2,000.00		2,200.00
			(G) 200.00		
Expenses Payable				(H) 100.00	
				(I) 700.00	
				(J) 350.00	
				(K) 300.00	
				(L) 750.00	
Deferred Income			(M) 60.00		
Interest Receivable			(N) 300.00		360.00
Interest Income				(M) 60.00	
				(N) 300.00	
COST OF SALES TO PROFIT AND LOSS					
NET INCOME TO L. A. ROBERTS, CAPITAL			9,633.00	9,633.00	316,980.00

Roberts

DECEMBER 31, 1958

BALANCE ADJUSTMENT	COST OF SALES		PROFIT AND LOSS		BALANCE SHEET	
Cr.	*Dr.*	*Cr.*	*Dr.*	*Cr.*	*Dr.*	*Cr.*
					14,000.00	
					2,000.00	
					12,000.00	
					28,000.00	
2,400.00						2,400.00
	24,000.00	21,000.00			21,000.00	
					3,600.00	
2,420.00						2,420.00
					8,000.00	
3,000.00						3,000.00
					4,000.00	
1,400.00						1,400.00
					30,000.00	
7,200.00						7,200.00
					12,000.00	
20,000.00						20,000.00
25,000.00						25,000.00
69,000.00						69,000.00
					8,000.00	
177,600.00				177,600.00		
			1,600.00			
			700.00			
	128,000.00					
4,000.00		4,000.00				
2,400.00		2,400.00				
	1,000.00					
			4,000.00			
			1,700.00			
			11,350.00			
			5,600.00			
			4,100.00			
			1,000.00			
			3,197.00			
			1,700.00			
			1,200.00			
			720.00			
			800.00			
			400.00			
			1,753.00			
					2,200.00	
1,450.00						1,450.00
750.00						750.00
					360.00	
360.00				360.00		
		125,600.00	125,600.00			
			12,540.00			12,540.00
316,980.00	153,000.00	153,000.00	177,960.00	177,960.00	145,160.00	145,160.00

These steps will be illustrated below in a continuation of the problem represented by the business of L. A. Roberts.

The Statement of Income

L. A. Roberts

STATEMENT OF INCOME FOR THE YEAR ENDED DECEMBER 31, 1958

Gross Sales				$177,600.00
Less Returned Sales and Allowances			$ 1,600.00	
Sales Discounts			700.00	2,300.00
Net Sales				$175,300.00
Cost of Sales:				
Merchandise Inventory, December 31, 1957			$ 24,000.00	
Purchases		$128,000.00		
Less Returned Purchases and Allowances	$4,000.00			
Purchases Discounts	2,400.00	6,400.00		
		$121,600.00		
Freight In		1,000.00	122,600.00	
			$146,600.00	
Merchandise Inventory, December 31, 1958			21,000.00	125,600.00
Gross Profit				$ 49,700.00
Selling Expenses:				
Advertising		$ 4,000.00		
Depreciation—Delivery Equipment		720.00		
Depreciation—Store Equipment		400.00		
Miscellaneous Selling Expense		1,700.00		
Salesmen's Salaries		11,350.00	$ 18,170.00	
General Expenses:				
Bad Debts Expense		$ 1,753.00		
Depreciation Expense—Buildings		1,200.00		
Depreciation Expense—Furniture and Fixtures		800.00		
General Expense		5,600.00		
General Salaries		4,100.00		
Insurance Expense		1,000.00		
Property Taxes		3,197.00	17,650.00	35,820.00
Net Profit from Operations				$ 13,880.00
Other Income:				
Interest Income				360.00
				$ 14,240.00
Other Expense:				
Interest Expense				1,700.00
Net Income				$ 12,540.00

The Balance Sheet

L. A. Roberts

BALANCE SHEET, DECEMBER 31, 1958

Assets

Current Assets:			
Cash			$ 14,000.00
Bonds			2,000.00
Notes Receivable			12,000.00
Interest Receivable			360.00
Accounts Receivable		$28,000.00	
Less Allowance for Bad Debts		2,400.00	25,600.00
Merchandise Inventory			21,000.00
Prepaid Expenses			2,200.00
			$ 77,160.00

Fixed Assets:	*Cost*	*Allowance for Depreciation*	*Net Book Value*	
Buildings	$30,000.00	$ 7,200.00	$22,800.00	
Delivery Equipment	3,600.00	2,420.00	1,180.00	
Furniture and Fixtures	8,000.00	3,000.00	5,000.00	
Store Equipment	4,000.00	1,400.00	2,600.00	
Land	12,000.00		12,000.00	
	$57,600.00	$14,020.00	$43,580.00	43,580.00
				$120,740.00

Liabilities and Capital

Current Liabilities:	
Notes Payable	$ 25,000.00
Accounts Payable	20,000.00
Expenses Payable	1,450.00
Deferred Income	750.00
	$ 47,200.00
Capital:	
L. A. Roberts, Capital	73,540.00
	$120,740.00

Advantages of the Work Sheet

1. As a quick financial summary of the results of an accounting period—a summary prepared outside the formal records of a business (see also page 272)—the work sheet represents a means by which the financial statements can be easily and quickly prepared. This is important because both monthly and yearly statements are much more useful when these statements are prepared *promptly*.

2. For the preparation of both interim and end-of-the-year financial statements, the work sheet is very useful. Adjusting entries, required to adjust the trial balance, appear on the work sheet. Financial statements

can be prepared without the formality of placing these adjusting entries on the books.

3. The work sheet is a valuable guide when formal adjusting and closing entries are placed on the books of a business at the end of its fiscal year.

Commentary on the Statement of Income

Like the illustration on page 200, the statement of income for the business of L. A. Roberts has been organized so as to emphasize information of significant usefulness to management.

A statement of income, for any given business, which includes all the profit and loss transactions of that business for an accounting period is called the "all-inclusive" type of income statement.

Accountants are not fully agreed as to whether or not so-called extraordinary or nonrecurring items of gain or loss should be included in a statement of income. Some accountants believe that the statement of income should be restricted so as to show the net-profit-from-operations *plus* other-income and *minus* other-expense. Net income, by this reasoning, becomes a value intended to represent the income earned by a business on its ordinary operations. So-called abnormal items would be debited or credited directly to the Capital account or accounts of a proprietorship or partnership. (The treatment of these items in corporate accounting is discussed in Chapter 20.) These abnormal items, accordingly, would not appear in the statement of income but would be revealed in the statement of capital.

Modern accounting thought today, however, is now moving strongly in the direction of including *all* the gains and losses of an accounting period in the statement of income. The statement of income is made fully inclusive by adding new sections called Special Income Credits and Special Income Debits, respectively, to care for unusual items of gain or loss. The final figure on this all-inclusive statement of income is called simply net income. (See illustration, page 200.)

Under this philosophy of accounting for business income, the capital account of a proprietorship business would receive entries for the following values only: (1) the net income (or loss) of an accounting period. (2) additions or withdrawals of capital (3) transfer of the balance of a proprietary drawing account.

The all-inclusive statement of income is discussed at greater length in Chapter 28 of this book.

Commentary on the Balance Sheet

The balance sheet of the L. A. Roberts problem illustrates how the balance sheet can be made very informative by a proper classification of

items. In the order of their systematic appearance on the balance sheet, the principal groupings are these:

ASSETS

1. Current Assets. Current assets are

Cash
Marketable securities (quickly convertible into cash) held and readily available for the current operating needs of a business,
Other assets which, within the next twelve months of normal business operations are expected to be (a) realized in cash or (b) used up in the production of income.

Common examples of current assets are cash, marketable securities, accounts and notes receivable, and inventory. Current assets should appear in the balance sheet in the order of their expected convertibility into cash.

While some accountants continue to follow the long-standing custom of classifying prepaid expenses as a separate and final group on the balance sheet, prepaid expenses are considered as *current assets* in this book. This classification is in harmony with accounting theory and with the recommendations of the American Institute of Accountants. Since the current assets of a business constitute its (gross) *working capital*, and since prepaid expenses are a part of the *working capital cycle* of a business, it is logical for prepaid expenses to be classified as current assets. Prepaid expenses are discussed further in the section below and also later in Chapter 29.

There has recently been some evidence of a tendency to broaden the definition of current assets.

For accounting purposes, the term *current assets* is used to designate cash and other assets or resources commonly identified as those which are reasonably expected to be realized in cash or sold or consumed during the *normal operating cycle* of a business. Thus the term comprehends in general such resources as (a) cash available for current operations and items which are the equivalent of cash; (b) inventories of merchandise, raw materials, goods in process, finished goods, operating supplies, and ordinary maintenance materials and parts; (c) trade accounts, notes and acceptances receivable; (d) receivables from officers, employees, affiliates, and others, if collectible in the ordinary course of business within a year. (e) instalment or deferred accounts and notes receivable if they conform generally to normal trade practices and terms with the business; (f) marketable securities representing the investment of cash available for current operations; and (g) prepaid expenses such as insurance, interest, rents, taxes, unused royalties, current paid advertising service not yet received, and operating supplies. Prepaid expenses are not current assets in the sense that they will be converted into cash but in the sense that, if not paid in advance, they would require the use of current assets during the operating cycle.[1]

[1] American Institute of Certified Public Accountants, *Accounting Research Bulletin No. 43* (New York: 1953), p. 20.

2. Fixed Assets. Fixed assets are tangible assets of rather "permanent" character required to discharge successfully and efficiently the administrative, sales, and other functions present in the operations of a business. Fixed assets generally have long lives. They are not intended for sale. Buildings, machinery, and office equipment are common examples of fixed assets.

Sometimes a business will have long-term investments in securities of one kind or another. These are long-term investments in assets but the investments are not fixed assets. They are generally shown as a new grouping of assets called Investments and placed between the current and fixed asset groupings of the balance sheet.

LIABILITIES AND NET WORTH

1. Current Liabilities. Liabilities which are payable within one year of the date of the balance sheet are current liabilities. Common examples of current liabilities are taxes payable, wages payable, and accounts payable.

The term *current liabilities* is used principally to designate obligations whose liquidation is reasonably expected to require the use of existing resources properly classifiable as current assets, or the creation of other current liabilities. As a balance-sheet category, the classification is intended to include obligations for items which have entered into the operating cycle, such as payables incurred in the acquisition of materials and supplies to be used in the production of goods or in providing services to be offered for sale; collections received in advance of the delivery of goods or performance of services; and debts which arise from operations directly related to the operating cycle, such as accruals for wages, salaries, commissions, rentals, royalties, and income and other taxes. Other liabilities whose regular and ordinary liquidation is expected to occur within a relatively short period of time, usually twelve months, are also intended for inclusion, such as short-term debts arising from the acquisition of capital assets, serial maturities of long-term obligations amounts required to be expended one year under sinking fund provisions, and agency obligations arising from the collection or acceptance of cash or other assets for the account of third persons.[2]

2. Long-Term Liabilities. Liabilities which mature after one year from the date of a balance sheet are long-term (or "fixed") liabilities. Notes, bonds, or mortgages payable, due in fifteen years from the date of a balance sheet, are examples of long-term liabilities. (*Note.* The L. A. Roberts balance sheet has no long-term liabilities.)

3. Capital. The capital (or net worth) of a proprietorship is the accounting value which represents the amount of the owner's interest in his business. The amount of this interest is represented by the *net* assets of the business, i.e., the excess of total assets over total liabilities.

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[2] *Ibid.*, p. 21.

Financial Statements Should Be Timely

Monthly and year-end financial statements should be placed in the hands of the management of a business as early as possible. The work of planning, controlling, and improving the operations of a business will be more effective when financial statements are promptly available for use. Good financial reports, promptly received, can help the executives of a business do a better job and fashion a stronger organization. Timely financial statements can be of material assistance to management in reviewing the effectiveness of the operating departments of a business, and in taking steps designed to reduce the costs not only of these departments but possibly of the accounting department as well.

How can the preparation of financial statements be expedited? In this expediting or streamlining process, the following procedures deserve consideration:

1. The accounts of the ledger and the books of original entry should be *well organized*. The accounts and accounting procedures of a business should be described in an accounting manual.
2. The search for improvements in an accounting system should be continuous. Improvements should be expected and, when instituted, should be willingly accepted. For larger businesses, especially, properly designed machines are indispensable components of an accounting system and of procedures looking toward improvements in the system.
3. The responsibilities of the accounting personnel of a business should be well defined. The accounting work should be distributed without placing an undue burden on any one person.
4. Month-end and year-end bookkeeping procedures should be described in writing in the accounting manual. Time schedules—for procedures such as closing and posting the books of original entry, subsidiary ledger reconciliations, the preparation of trial balances and statements, and so on—should be fixed and strictly adhered to.

Bookkeeping Method at the End of the Accounting Year

ADJUSTING ENTRIES Adjusting entries should be formally recorded in the journal, and posted, so that the balances of accounts in the general ledger will be those appearing in the financial statements.

For the L. A. Roberts problem, the adjusting entries are

Depreciation Expense—Buildings	1,200.00	
Allowance for Depreciation—Buildings		1,200.00
To record depreciation expense on buildings for 1958.		
Depreciation Expense—Delivery Equipment	720.00	
Allowance for Depreciation—Delivery Equipment		720.00
To record depreciation expense on delivery equipment for 1958.		

Depreciation Expense—Furniture and Fixtures	800.00	
Allowance for Depreciation—Furniture and Fixtures		800.00
To record depreciation expense on furniture and fixtures for 1958.		
Depreciation Expense—Store Equipment	400.00	
Allowance for Depreciation—Store Equipment		400.00
To record depreciation expense on store equipment for 1958.		
Bad Debts Expense	1,753.00	
Allowance for Bad Debts		1,753.00
To record estimated bad debts for 1958, 1% of net sales of $175,300.00.		
Prepaid Expenses	2,200.00	
Advertising Expense		2,000.00
Insurance Expense		200.00
To record prepaid advertising and insurance.		
Salesmen's Salaries	350.00	
General Salaries	100.00	
Property Taxes	300.00	
Interest Expense	700.00	
Expenses Payable		1,450.00
To record accrued expenses.		
Sales	750.00	
Deferred Income		750.00
To record liability outstanding on gift certificates, original credit having been made to the Sales account.		
Interest Receivable	360.00	
Interest Income		360.00
To record accrued interest income.		

CLOSING ENTRIES After the financial statements have been prepared for the fiscal year of a business and after the balances of the accounts in the *general ledger* agree with the values appearing on the financial statements, the books are ready to be "closed." As already discussed and illustrated in Chapters 4, 5, and 7, the closing process consists of "closing" all income and cost accounts by transferring their balances to the Profit and Loss account. This account will then contain all of the items constituting the net income of a business. The Profit and Loss account, in turn, is "closed" by transferring its balance to the capital account of the proprietor.

Closing entries are made only at the end of the accounting year. For the L. A. Roberts problem, the closing entries are as follows:

Cost of Sales	125,600.00	
Merchandise	21,000.00	
Returned Purchases and Allowances	4,000.00	
Purchases Discounts	2,400.00	
Merchandise		24,000.00
Purchases		128,000.00
Freight In		1,000.00
To record the cost of goods sold for 1958.		

Sales	177,600.00	
Returned Sales and Allowances		1,600.00
Sales Discounts		700.00
Profit and Loss		175,300.00
To close first 3 accounts into Profit and Loss.		
Profit and Loss	125,600.00	
Cost of Sales		125,600.00
To close latter account into Profit and Loss.		
Profit and Loss	18,170.00	
Advertising Expense		4,000.00
Depreciation Expense—Delivery Equipment		720.00
Depreciation Expense—Store Equipment		400.00
Miscellaneous Selling Expense		1,700.00
Salesmens' Salaries		11,350.00
To close selling expenses into Profit and Loss.		
Profit and Loss	17,650.00	
Bad Debts Expense		1,753.00
Depreciation Expense—Buildings		800.00
Depreciation Expense—Furniture and Fixtures		1,200.00
General Expense		5,600.00
General Salaries		4,100.00
Insurance Expense		1,000.00
Property Taxes		3,197.00
To close general expenses into Profit and Loss.		
Interest Income	360.00	
Profit and Loss		360.00
To close other income into Profit and Loss.		
Profit and Loss	1,700.00	
Interest Expense		1,700.00
To close other expense into Profit and Loss.		
Profit and Loss	12,540.00	
L. A. Roberts, Capital		12,540.00
To close the profit and loss account by transferring the net income of 1958 to capital account.		
L. A. Roberts, Capital	8,000.00	
L. A. Roberts, Personal		8,000.00
To transfer balance of personal account to capital account.		

After these closing entries have been posted, the Profit and Loss account will appear as follows:

PROFIT AND LOSS

1958				1958			
Dec.	31	Cost of Sales	125,600.00	Dec.	31	Sales (net)	175,300.00
		Selling Expenses	18,170.00			Interest Income	360.00
		General Expenses	17,650.00				
		Interest Expense	1,700.00				
		Net Income to L. A. Roberts, Capital	12,540.00				
			175,660.00				175,660.00

In this order of work it is important to observe that closing entries can be conveniently and quickly prepared by direct and systematic use of the values of the profit and loss statement. In the transfer of nominal accounts to the Profit and Loss account, the closing journal entries should follow the order in which account values appear on the profit and loss statement: that is, the first entry will transfer Sales, and Returned Sales and Allowances, to Profit and Loss; the next entry or entries will transfer Merchandise, Purchases, Returned Purchases and Allowances, Purchases Discounts, and Freight In, to Cost of Sales; then, after the new inventory has been recorded, Cost of Sales will be transferred to Profit and Loss; operating expenses will next be transferred to Profit and Loss, and so on.

The Profit and Loss account is a summary account[3] in which all elements of loss and gain are gathered together to show the net gain or loss of the accounting year. While postings to the Profit and Loss account may be made in detail, the modern tendency is to post to the account by group totals only, as in the illustration. With details contained in statements of income and in work sheets, there is no longer any necessity for showing details in the Profit and Loss account.

The Profit and Loss account is not an account for current entry. Direct debits and credits to Profit and Loss, during an accounting period, are contrary to the function of the Profit and Loss account and may also cause significant information to be overlooked.

"Reversing Entries" at the Beginning of a New Accounting Year

REVERSING ENTRIES After the books of a business have been closed, many bookkeepers begin the new accounting year by making "reversing entries" for certain accrued and deferred expenses and incomes. Reversing entries are appropriately made only when the bookkeeping of a business has been as follows:

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[3] At the end of the accounting year certain accounts like Profit and Loss are opened to summarize the information of several accounts. The net balance of each of these new accounts is transferred to some other account. Accounts which function in this manner are known as "summary accounts," or as "clearing accounts." The Cost of Sales account, departmental summary accounts, and the Profit and Loss account are all examples of summary accounts.

A further kind of serviceability of summary accounts may be illustrated as follows:

Company X transfers all expenses related to building occupancy—such as Depreciation Expense—Building, Property Taxes, Building Maintenance, Utility Expenses (heat and light, for example)—to an account called Building Expense account. The balance of the Building Expense account gives the cost of the company's occupancy of its *owned* property. The company may then compare the cost of occupancy under its own ownership with the cost that would be incurred were the property occupied on an outright rental basis.

The balance of the Building Expense account may be transferred to Profit and Loss or, in the interest of further statistical information, it may be distributed to other accounts—departmental summary accounts, for example.

1. Expense expenditures have been originally recorded as debits to expense accounts irrespective of the number of accounting periods benefited by these expenditures.
2. Income collections have been originally recorded as credits to income accounts irrespective of the number of accounting periods required to earn these incomes.

Under certain circumstances, it may also be appropriate to make reversing entries for accrued expenses and accrued incomes. This would be the case

1. when accrued expenses have been originally recorded—by means of adjusting entries at the end of an accounting period—by debits to expense accounts and credits to liability accounts;
2. when accrued incomes have been originally recorded—by means of adjusting entries at the end of an accounting period—by debits to asset accounts and credits to income accounts;

and when, further, it is desired to reverse these particular adjusting entries for accrued expenses and incomes in order to record the transactions of a new accounting period without the necessity of referring to the accrued expenses and accrued incomes recorded at the end of the old accounting period.

Reversing entries are never made for

1. end-of-the-year adjusting entries covering such values as merchandise inventory, depreciation expense, and bad debts expense;
2. expense expenditures whose values were originally debited to prepaid expense accounts and periodically written off to expense accounts thereafter; or
3. income transactions whose values were originally credited to deferred income accounts and periodically written off to income accounts thereafter.

The reasons for making "reversing entries" will be discussed and illustrated below.

Prepaid Expenses. Assets representing prepaid expenses will normally convert—more or less rapidly—into expense in the new accounting year. For purposes of bookkeeping convenience the entire balance of a prepaid expense account—created by an adjusting entry at the end of the old accounting year—will be transferred to its related expense account on the first day of the new accounting year.

After the following reversing entry has been posted

Fuel Expense	400.00	
Prepaid Expenses		400.00
To reverse adjusting entry of December 31, 1958.		

the two accounts (see original illustration, page 236) will appear as follows:

PREPAID EXPENSES

1958					1959				
Dec.	31		J72	400.00	Jan.	1		J1	400.00

FUEL EXPENSE

1958					1958				
Jan.	2		CP1	200.00	Dec.	31		J72	400.00
Feb.	4		CP3	400.00			To P. & L.	J75	1,000.00
Sept.	9		CP20	300.00					
Nov.	16		CP31	200.00					
Dec.	11		CP34	300.00					
				1,400.00					1,400.00
1959									
Jan.	1		J1	400.00					

Accrued Expenses. After the following reversing entry has been posted:

Wages Payable	5,000.00	
Wages Expense		5,000.00
To reverse adjusting entry of December 31, 1958.		

the two accounts (see original illustration, page 241) will appear as follows:

WAGES PAYABLE

1959					1958				
Jan.	1		J1	5,000.00	Dec.	31		J72	5,000.00

WAGES EXPENSE

1958					1958				
Dec.	31	Balance		45,000.00	Dec.	31	To P. & L.	J75	50,000.00
			J72	5,000.00					
				50,000.00					50,000.00
					1959				
					Jan.	1		J1	5,000.00

On payday, January 3, 1959, the payroll is paid and debited to Wages Expense. On this date, then, there is no balance in the Wages Expense account. This is correct because no wages for 1959 have been paid to this date.

Deferred Income. Deferred incomes will normally convert—more or less rapidly—into income in the new accounting year. For purposes of bookkeeping convenience the entire balance of a deferred income account is transferred to its related income account on the first day of the new accounting year.

After the following reversing entry has been posted:

Deferred Rent Income	9,000.00	
Rent Income		9,000.00
To reverse adjusting entry of December 31, 1958.		

the two accounts (see original illustration, page 245) will appear as follows:

DEFERRED RENT INCOME

1959						1958				
Jan.	1		J1	9,000.00		Dec.	31		J84	9,000.00

RENT INCOME

1958						1958				
Dec.	31		J84	9,000.00		Jan.	1		CR2	1,000.00
		To P. & L.	J90	12,000.00		Feb.	1		CR5	1,000.00
						Mar.	1		CR8	1,000.00
						Apr.	1		CR13	1,000.00
						May	1		CR17	1,000.00
						June	1		CR19	1,000.00
						July	1		CR20	1,000.00
						Aug.	1		CR23	1,000.00
						Sept.	1		CR28	1,000.00
						Oct.	1		CR33	12,000.00
				21,000.00						21,000.00
						1959				
						Jan.	1		J1	9,000.00

Accrued Income. After the following reversing entry has been posted:

Mortgage Interest Income	750.00	
Mortgage Interest Receivable		750.00
To reverse adjusting entry of December 31, 1958.		

the two accounts (see original illustration, page 249) will appear as follows.

MORTGAGE INTEREST RECEIVABLE

1958						1959				
Dec.	31		J72	750.00		Jan.	1		J1	750.00

MORTGAGE INTEREST INCOME

1958						1958				
Dec.	31	To P. & L.	J75	1,500.00		July	1		CR20	750.00
						Dec.	31		J72	750.00
				1,500.00						1,500.00
1959										
Jan.	1		J1	750.00						

On January 2, 1959, the accrued interest of $750.00 is collected and credited to Mortgage Interest Income. On this date, then, there is no bal-

ance in the Mortgage Interest Income account. This is correct because no interest income for 1959 has been collected to date.

Unrecorded Bills. When a business records its bills for purchases and expenses only when paid, the unpaid bills at the end of an accounting period are recorded by an adjusting entry. This adjusting entry is reversed at the beginning of the new accounting period.

Example

1958			
Dec. 31	Utilities Expense	90.00	
	Purchases	300.00	
	Office Equipment	400.00	
	Accounts Payable		790.00
	To record outstanding unpaid and unrecorded bills.		
1959			
Jan. 1	Accounts Payable	790.00	
	Utilities Expense		90.00
	Purchases		300.00
	Office Equipment		400.00
	To reverse adjusting entry of December 31, 1958.		

When these three bills are paid, the disbursement is debited to the Utilities Expense, Purchases, and Office Equipment accounts, respectively.

Reversing Entries for the L. A. Roberts Problem. The reversing entries, January 1, 1959, would be as follows:

Advertising Expense	2,000.00	
Insurance Expense	200.00	
Prepaid Expenses		2,200.00
To reverse adjusting entry of December 31, 1958.		
Expenses Payable	1,450.00	
Salesmen's Salaries		350.00
General Salaries		100.00
Property Taxes		300.00
Interest Expense		700.00
To reverse adjusting entry of December 31, 1958.		
Deferred Income	750.00	
Sales		750.00
To reverse adjusting entry of December 31, 1958.		
Interest Income	360.00	
Interest Receivable		360.00
To reverse adjusting entry of December 31, 1958.		

REVERSING ENTRIES (*Discussion continued*) In the immediately preceding discussion, reversing entries were made—after the books were closed—for all adjustments except those for merchandise, depreciation expense, and bad debts expense.

Some accountants, however, recommend that reversing entries be omitted altogether. After adjusting entries have been recorded, and the books closed, these accountants would make the following entries in the *new* accounting year:

As to Prepaid Expenses. At the *end* of the *new* accounting year, the balances of prepaid expense accounts would be adjusted through expense accounts so as to be left with balances reflecting the values for the new inventories of prepaid expenses.

As to Accrued Expenses. When accrued expenses of the old accounting year are paid in the new accounting year, each of these disbursements would be debited to the correct liability account. All other disbursements in payment of expense transactions would be debited to appropriate expense accounts. At the end of the new accounting year, adjusting entries for unrecorded accrued expenses would be placed on the books in the usual manner.

As to Deferred Incomes. At the end of the new accounting year, the balances of deferred income accounts would be adjusted through income accounts so as to be left with correct new balances—those appearing on the balance sheet at the end of the new accounting year.

As to Accrued Incomes. When accrued incomes of the old accounting year are collected in the new accounting year, the collections should be credited to asset accounts like Interest Receivable, Rent Receivable, and so on. All other collections of income (earned in the new accounting year) would be credited to appropriate income accounts. At the end of the new accounting year, adjusting entries for unrecorded accrued incomes would be placed on the books in the usual manner.

As to Bills for Expenses. When bills of the old accounting year are paid in the new accounting year, each of these disbursements should be debited to the correct liability account, Expenses Payable, for example. All other disbursements in payment of bills for expenses would be debited to appropriate expense accounts. At the end of the new accounting year, adjusting entries for unrecorded expense bills would be placed on the books in the usual manner.

PROBLEMS

Problem 14–1. The condensed trial balance of the business of W. K. Barnes on December 31, 19__, was

Cash	$ 40,000.00	
Accounts Receivable	25,000.00	
Merchandise Inventory	20,000.00	
Building	60,000.00	
Allowance for Depreciation—Building		$ 10,000.00
Land	5,000.00	
Accounts Payable		40,000.00

W. K. Barnes, Capital		100,000.00
Sales		100,000.00
Purchases	70,000.00	
General Expenses	12,000.00	
Wages Expense	18,000.00	
	$250,000.00	$250,000.00

Additional Information

1. Depreciation expense on the building, $3,000.00.
2. Uncollectible accounts receivable are estimated at $1,000.00.
3. Wages unpaid and unrecorded, $2,000.00.
4. Merchandise inventory, December 31, 19__, $30,000.00.

Required

1. Work sheet.
2. Statement of income for the year ended December 31, 19__.
3. Balance sheet, December 31, 19__.

Problem 14–2. The trial balance of the business of John E. Davis on December 31, 19__, was

Cash	$ 5,200.00	
Accounts Receivable	7,500.00	
Merchandise Inventory	10,000.00	
Miscellaneous Equipment	12,000.00	
Allowance for Depreciation—Miscellaneous Equipment		$ 3,000.00
Building	50,000.00	
Allowance for Depreciation—Building		5,000.00
Land	5,000.00	
Accounts Payable		10,000.00
John E. Davis, Capital		68,000.00
Sales		33,000.00
Purchases	20,000.00	
Advertising Expense	1,500.00	
General Expense	2,000.00	
Wages Expense	5,800.00	
	$119,000.00	$119,000.00

Additional Information

1. There is on hand an unrecorded and unpaid advertising bill, $500.00.
2. Depreciation expense for the year is estimated at building, $1,-500.00; miscellaneous equipment, $1,000.00.
3. Accrued wages amount to $200.00.
4. Uncollectible accounts receivable are estimated at $500.00.
5. The inventory of merchandise, December 31, 19__, is $13,000.00.

Required

1. Work sheet.
2. Statement of income for the year ended December 31, 19__.
3. Balance sheet, December 31, 19__.

Problem 14–3. The trial balance of the business of John L. Knox on December 31, 19__, was

Cash	$ 63,000.00	
Accounts Receivable	100,000.00	
Merchandise Inventory	120,000.00	
Warehouse and Equipment	100,000.00	
Accounts Payable		$ 50,000.00
John L. Knox, Capital		300,000.00
Sales		500,000.00
Purchases	280,000.00	
General Expenses	152,000.00	
Rent Expense	50,000.00	
Rent Income		15,000.00
	$865,000.00	$865,000.00

Additional Information

1. Estimated losses on accounts receivable, $5,000.00.
2. Depreciation expense, 5%.
3. Prepaid general expenses, $30,000.00.
4. Accrued general expenses, $3,000.00.
5. Rent income recorded but unearned, $2,000.00.
6. Unrecorded accrued rent income, $7,000.00.
7. Merchandise inventory, December 31, 19__, $100,000.00.

Required

1. Work sheet.
2. Statement of income for the year ended December 31, 19__,
   a) before giving effect to adjusting entries.
   b) after giving effect to adjusting entries.
3. Balance sheet, December 31, 19__.

Problem 14–4. From the trial balance below, the bookkeeper of the business of John E. Clark has prepared a statement of income for the year 19__, showing a net income of $2,000.00 (before income taxes of 33⅓%). Mr. Clark does not understand this low net income and asks you to investigate and to prepare, if necessary, corrected financial statements.

In the course of your investigation, you find the following data not incorporated in the financial statements prepared by the bookkeeper:

General expenses are prepaid to the extent of $30,000.00.
Accrued and unrecorded general expenses amount to $3,000.00.
Rent income has been collected in advance to the extent of $2,000.00.
Accrued and unrecorded rent income receivable amounts to $5,000.00.
Bad debts are estimated at $5,000.00 for the year.
Annual depreciation rate on equipment and fixtures is 10%.

John E. Clark

TRIAL BALANCE, DECEMBER 31, 19__

Cash	$ 37,000.00	
Accounts Receivable	100,000.00	
Rent Receivable	2,000.00	
Merchandise Inventory	120,000.00	
Equipment and Fixtures	120,000.00	
Allowance for Depreciation		$ 11,000.00
Accounts Payable		50,000.00
John E. Clark, Capital		300,000.00
John E. Clark, Personal	8,000.00	
Sales		500,000.00
Purchases	280,000.00	
Depreciation Expense—Equipment and Fixtures	11,000.00	
General Expense	200,000.00	
Rent Income		17,000.00
	$878,000.00	$878,000.00

Required

1. Statement of income for the calendar year 19__ showing net income after income taxes. Merchandise inventory, December 31, 19__, $100,000.00.
2. Balance sheet, December 31, 19__.

Problem 14–5. On December 31, 1958, the trial balance of the business of John L. Kane was

Cash	$ 40,000.00	
Accounts Receivable	100,000.00	
Bonds of the Case Corporation	20,000.00	
Merchandise Inventory	80,000.00	
Accounts Payable		$ 20,000.00
6% Notes Payable		30,000.00
John L. Kane, Capital		154,000.00
Sales		500,000.00
Purchases	300,000.00	
Selling Expense	94,000.00	
General Expense	20,000.00	
Wages Expense	50,000.00	
	$704,000.00	$704,000.00

Additional Information

1. The sales figure includes a $3,000.00 sales invoice, the merchandise for which, it is found, is still in the warehouse and included in the new inventory of merchandise. Title to this merchandise has not yet passed to the customer.
2. The bad debts expense for the year is estimated at 5% of sales.
3. Accounts receivable include $5,000.00 of known uncollectible accounts.
4. The new inventory of merchandise is $100,000.00.
5. The accrued payroll is $6,000.00.

6. The notes payable are for six months and are dated October 1, 1958; no interest has been paid on these notes.
7. There are miscellaneous general supplies on hand amounting to $1,000.00.
8. The Case bonds were acquired January 1, 1958. They carry interest at the rate of 5% per year, payable July 1 and January 1. None of the interest on these bonds for the year 1958 has been collected. This interest, it is expected, will be collected within the next several days.

Required

1. Work sheet.
2. Statement of income for the year ended December 31, 1958.
3. Balance sheet, December 31, 1958.

Problem 14–6. The trial balance of the business of L. A. Evans on December 31, 19__, was as follows:

Cash	$ 61,000.00	
Accounts Receivable	206,000.00	
Allowance for Bad Debts		$ 100.00
4½% Bonds of Standard Telephone Co.	200,000.00	
Merchandise Inventory	100,000.00	
Office Equipment	20,000.00	
Allowance for Depreciation		5,000.00
Building	100,000.00	
Allowance for Depreciation		20,000.00
Land	30,000.00	
Accounts Payable		150,000.00
Social Security Taxes Payable		400.00
L. A. Evans, Capital		500,000.00
L. A. Evans, Personal	13,000.00	
Sales		820,000.00
Purchases	610,000.00	
Purchases Discounts		10,000.00
Real Estate Taxes	9,000.00	
Social Security Taxes	1,000.00	
Wages and Salaries	160,000.00	
Bond Interest Income		4,500.00
	$1,510,000.00	$1,510,000.00

Additional Information

1. Three weeks ago a cash deposit of $20,000.00 was received from a customer to apply on goods to be shipped in January. The bookkeeper credited this receipt to the Sales account.
2. Losses on uncollectible accounts receivable for the year are estimated at 1% of net sales.
3. There are uncollectible accounts receivable on the books which should be written off, $2,000.00.
4. Unrecorded social security taxes amount to $5,000.00.

5. Annual depreciation rates are office equipment, 10%; building, 4%.
6. Accrued bond interest receivable, $4,500.00.
7. On December 31, 19__, real-estate taxes are prepaid for the next 6 months, $6,000.00.
8. Merchandise inventory, December 31, 19__, $120,000.00.

Required

1. Work sheet.
2. Statement of income for the year ended December 31, 19__.
3. Balance sheet, December 31, 19__.

Problem 14–7. Edwin J. Scott, whose accounts were maintained on a calendar-year basis, desired a profit and loss statement for the six months ended June 30, 19__. The trial balance of his business, June 30, 19__, is given below.

The books of Mr. Scott are kept on the accrual basis of accounting. Some values, like those for bad debts, depreciation, and insurance expense, are recorded monthly in the journal. The entries for the month of June have not yet been recorded:

Cash	$ 27,500.00	
Accounts Receivable	40,000.00	
Allowance for Losses		$ 5,000.00
Inventory	20,000.00	
Prepaid Insurance	2,200.00	
Prepaid Rent	9,500.00	
Office Equipment	12,000.00	
Allowance for Depreciation		4,900.00
Accounts Payable		10,000.00
Social Security Taxes Payable		2,000.00
Edwin J. Scott, Capital		100,000.00
Edwin J. Scott, Personal	10,000.00	
Sales		300,000.00
Purchases	160,000.00	
Purchases Discounts		4,000.00
Freight In	10,000.00	
Advertising Expense	29,000.00	
Sales Salaries	50,000.00	
General Expenses	12,500.00	
Administrative Salaries	30,000.00	
Bad Debts Expense	6,500.00	
Depreciation Expense—Office Equipment	500.00	
Insurance Expense	1,000.00	
Rent Expense	2,500.00	
Social Security Taxes	2,700.00	
	$425,900.00	$425,900.00

Additional Information

1. Office equipment is being depreciated at the rate of 10% annually.
2. Insurance expense is estimated at $200.00 monthly.
3. Losses on accounts receivable are estimated at 2½% of sales. Sales for the month of June are $40,000.00.

4. On June 30, 19__, the amount of prepaid rent (for 18 months) is $9,000.00.
5. Social security taxes for June, $500.00, are unrecorded.
6. Prepaid advertising, June 30, 19__, $3,000.00.
7. Inventory, June 30, 19__, $30,000.00.

Required

1. Work sheet.
2. Statement of income for the six months ended June 30, 19__.
3. Balance sheet, June 30, 19__.

Problem 14–8. Following is the trial balance of the business of J. B Elwell on December 31, 19__, before adjusting entries:

Cash	$ 6,000.00	
Accounts Receivable	3,000.00	
Merchandise Inventory	10,000.00	
Delivery Equipment	2,500.00	
Allowance for Depreciation—Delivery Equipment		$ 500.00
Accounts Payable		2,000.00
Notes Payable		5,000.00
J. B. Elwell, Capital		14,080.00
J. B. Elwell, Personal	4,000.00	
Sales		61,000.00
Sales Discounts	1,000.00	
Purchases	43,000.00	
Returned Purchases		1,000.00
Purchases Discounts		820.00
Freight In	3,000.00	
Advertising Expense	2,100.00	
Delivery Expense	1,500.00	
Insurance Expense	100.00	
Miscellaneous Expense	2,200.00	
Salaries and Wages	6,000.00	
	$84,400.00	$84,400.00

Additional Information

1. Bad debts are estimated at $100.00.
2. Merchandise inventory, December 31, 19__, $13,575.00.
3. Accrued wages and salaries amount to $500.00.
4. Advertising paid in advance, $100.00.
5. The notes payable are dated October 20, 19__. Although these notes carry interest at the rate of 7%, no interest has yet been paid on these notes for the period October 20—December 31, 19__.
6. Delivery equipment should be depreciated at the annual rate of 20%.
7. Insurance premium paid in advance, $25.00.
8. There is on hand a letter from a creditor advising that we took $20.00 too much cash discount on a recent remittance. On investigation we find that the creditor is correct. The cashier is instructed to make payment of this amount on January 10.

Required

1. Work sheet.
2. Statement of income for the year ended December 31, 19__.
3. Balance sheet, December 31, 19__.

Problem 14–9.

R. L. Clarkson

TRIAL BALANCE, DECEMBER 31, 19__

Cash	$ 33,400.00	
Accounts Receivable	50,000.00	
Allowance for Bad Debts		$ 100.00
Notes Receivable	25,000.00	
Notes Receivable Discounted		10,000.00
Merchandise Inventory	40,000.00	
Prepaid Insurance	1,200.00	
Miscellaneous Equipment	10,000.00	
Allowance for Depreciation—Miscellaneous Equipment		3,000.00
Buildings	90,000.00	
Allowance for Depreciation—Buildings		7,300.00
Land	15,000.00	
Accounts Payable		36,000.00
Interest Payable		1,100.00
Mortgage Payable		40,000.00
R. L. Clarkson, Capital		160,000.00
Sales		210,000.00
Purchases	125,000.00	
Purchases Discounts		3,000.00
Freight In	10,000.00	
Miscellaneous Sales Expense	18,600.00	
Sales Salaries	29,000.00	
Miscellaneous General Expense	8,000.00	
General Salaries	14,000.00	
Interest Income		1,000.00
Interest Expense	2,300.00	
	$471,500.00	$471,500.00

Additional Information

1. Merchandise inventory, December 31, 19__, $50,000.00.
2. Interest accrued on notes receivable, $300.00; on mortgage, $1,200.00. Interest received in advance, $100.00.
3. Accrued payroll: sales salaries, $2,000.00; general salaries, $1,000.00.
4. Annual depreciation rates: buildings, 3%; miscellaneous equipment, 10%.
5. Unexpired insurance premium, $500.00. Insurance premiums, as paid, have been debited to Prepaid Insurance.
6. The bad debts expense for the year is estimated at 1% of net sales.

Required

1. Work sheet
2. Statement of income for the year ended December 31, 19__.
3. Balance sheet, December 31, 19__.

Problem 14–10. Before adjustment, the trial balance of the business of W. C. Logan on December 31, 19__, was as follows:

Cash	$ 93,685.00	
Accounts Receivable	35,450.00	
Notes Receivable	14,270.00	
Merchandise Inventory	70,770.00	
Prepaid Advertising	1,623.00	
Prepaid Insurance	1,065.00	
Prepaid Taxes	1,530.00	
Delivery Equipment	10,000.00	
Allowance for Depreciation—Delivery Equipment		$ 2,000.00
Miscellaneous Equipment	21,350.00	
Allowance for Depreciation—Miscellaneous Equipment		3,000.00
Building	70,000.00	
Allowance for Depreciation—Building		7,000.00
Land	20,000.00	
Accounts Payable		20,579.00
Notes Payable		60,000.00
Mortgage Payable (due in ten years)		50,000.00
W. C. Logan, Capital		200,000.00
Sales		243,061.00
Purchases	211,600.00	
General Expenses	13,090.00	
Wages and Salaries	18,548.00	
Interest Earned		1,185.00
Interest Expense	3,844.00	
	$586,825.00	$586,825.00

Adjustment Data

1. Merchandise inventory, December 31, 19__, $101,960.00.
2. Annual depreciation rates: building, 2%; delivery equipment, 20%; miscellaneous equipment, 10%.
3. An allowance for bad debts amounting to 8% of the accounts receivable should be established in order to care for estimated uncollectible accounts receivable.
4. The true amount of prepaid expenses on December 31, 19__, is advertising, $250.00; insurance, $300.00; property taxes, $375.00.
5. Unpaid and unrecorded payroll as of December 31, 19__, $1,254.00.
6. Accrued interest payable on notes payable and mortgage payable, $2,908.00.
7. Of the $1,185.00 interest income on the books, $15.00 is prepaid.
8. There is unrecorded interest income of $212.00 on the notes receivable. This interest, while earned, is not yet due for payment.

Required

1. Work sheet.
2. Statement of income for the year ended December 31, 19__.
3. Balance sheet, December 31, 19__.

Problem 14–11. The trial balance of the business of James A. Ryan, New York, N. Y., on December 31, 19__, was as follows:

Cash	$ 10,697.00	
Notes Receivable	10,000.00	
Notes Receivable Discounted		$ 7,000.00
Accounts Receivable	33,000.00	
Inventory	10,000.00	
Prepaid Insurance	220.00	
Automobiles	5,000.00	
Accounts Payable		6,000.00
Notes Payable		5,000.00
James A. Ryan, Capital		55,000.00
James A. Ryan, Personal	5,000.00	
Sales		104,260.00
Sales Returns	2,982.00	
Sales Discounts	1,278.00	
Purchases	81,050.00	
Purchases Discounts		2,000.00
Freight In	1,500.00	
Advertising Expense	3,200.00	
Delivery Expense	1,626.00	
General Expense	4,071.00	
Wages and Salaries	9,476.00	
Interest Income		60.00
Interest Expense	220.00	
	$179,320.00	$179,320.00

Additional Information

1. Unexpired insurance premium, $100.00.
2. Stamps and office supplies on hand, $101.00.
3. Accrued interest receivable on notes receivable on hand, i.e., on those notes not discounted: 100 days at 6% per annum.
4. All of the discounted notes receivable have been paid except one for $1,000.00.
5. Bad debts on accounts receivable are estimated at 1% of net sales (after returns and discounts).
6. Inventory, December 31, 19__, $22,000.00.
7. Depreciation on automobiles, 20% annually.
8. Accrued wages and salaries, $524.00.
9. In a sale to William E. Cooper, Buffalo, N. Y. (terms f.o.b. New York), the freight was prepaid at New York and debited to Delivery Expense, $26.00.
10. A bill, dated December 27, 19__, for the purchase of merchandise was received and recorded as $4,386.00. It is now found that the correct amount of the bill (which is unpaid) is $4,836.00. (The

merchandise in question is included in the new inventory of December 31, 19__, at the correct amount.)

11. Income taxes are estimated at 30% of net income before income taxes.

Required

1. Statement of income for the calendar year 19__, showing net income after income taxes.
2. Balance sheet, December 31, 19__.

Problem 14–12. The trial balance of the business of Robert E. Lynn on December 31, 19__, was as follows:

Cash	$ 108,000.00	
Accounts Receivable	224,000.00	
Allowance for Losses		$ 5,000.00
Notes Receivable	100,000.00	
Notes Receivable Discounted		35,000.00
Inventory	100,000.00	
Office Equipment	20,000.00	
Allowance for Depreciation—Office Equipment		5,000.00
Building	100,000.00	
Allowance for Depreciation—Building		20,000.00
Land	25,000.00	
Accounts Payable		100,000.00
Social Security Taxes Payable		400.00
Robert E. Lynn, Capital		500,000.00
Robert E. Lynn, Personal	20,000.00	
Sales		820,000.00
Purchases	610,000.00	
Purchases Discounts		20,000.00
Freight In	30,000.00	
Property Taxes	10,000.00	
Social Security Taxes	1,400.00	
Wages and Salaries	160,000.00	
Interest Income		3,000.00
	$1,508,400.00	$1,508,400.00

Additional Information

1. Three weeks ago a shipment of merchandise was made to R. W. McNatt & Co. on terms sight draft, bill of lading attached, $20,000.00. The bookkeeper debited Accounts Receivable and credited Sales. It is now learned that the shipment and draft have been refused, and that the merchandise is being returned. (See also #8 below.)
2. Bad debts are estimated at 1% of net sales.
3. There are certain uncollectible accounts receivable on the books which should be written off, $4,000.00.
4. Unrecorded social security taxes amount to $4,600.00 (employer's expense).
5. Annual depreciation rates are office equipment, 10%; building, 5%.

6. In June of the current year, real-estate taxes of $6,000.00 were paid in advance for the twelve months ending June 30, 19__ (next year).
7. Mr. Lynn has been notified by his bank that one of his notes receivable discounted (Ben A. Glatz, maker) for $5,000.00 has not been paid and that, accordingly, the bank has charged his bank account for the amount due, $5,000.00.
8. The inventory of merchandise, December 31, 19__, is valued at cost, $205,000.00. This inventory includes all merchandise on hand, in transit, and the McNatt merchandise (see #1 above) at correct accounting valuations.
9. Income taxes for the year are estimated at 30% of net income before deduction of income taxes.

Required

1. Statement of income for the year ended December 31, 19__, showing net income after income taxes.
2. Balance sheet, December 31, 19__.

Problem 14–13. Allen A. Speers maintained the accounts of his business on a calendar year basis. On September 30 of the past calendar year, the trial balance of his general ledger was as follows:

Cash	$ 82,400.00	
Accounts Receivable	108,000.00	
Notes Receivable	70,000.00	
Notes Receivable Discounted		$ 30,000.00
Inventory	90,000.00	
Salesmen's Automobiles	30,000.00	
Allowance for Depreciation—Salesmen's Automobiles		7,500.00
Office Equipment and Machines	12,000.00	
Allowance for Depreciation—Office Equipment and Machines		2,100.00
Building	60,000.00	
Allowance for Depreciation—Building		10,750.00
Land	20,000.00	
Accounts Payable		26,000.00
Social Security Taxes Payable		2,300.00
Withholding Income Taxes Payable		3,000.00
Allen A. Speers, Capital		300,000.00
Sales		500,000.00
Purchases	300,000.00	
Purchases Discounts		12,000.00
Freight In	20,000.00	
Salesmen's Salaries	50,000.00	
Salesmen's Traveling Expenses	20,000.00	
General Office Salaries	30,350.00	
Social Security Taxes	900.00	
	$893,650.00	$893,650.00

Additional Information, September 30, 19__

1. The inventory of merchandise on hand was estimated at $60,000.00.
2. Through error, several sales of merchandise of October 1 were billed and recorded as of September 30, 19__, $10,000.00. The merchandise was not shipped until the afternoon of October 1; it was, however, correctly included in the inventory of September 30, 19__.
3. Bad debts are estimated at 1% of net sales. There is one customer's account (David J. Cohen) now on the books, $1,000.00, which is worthless and should be written off.
4. Unpaid and unrecorded social security taxes (unemployment) are $2,100.00.
5. Annual depreciation rates are salesmen's automobiles, 33⅓%; office equipment and machines, 10%; building, 5%.
6. Half of the notes receivable discounted have been paid.
7. Real-estate taxes for the calendar year are unpaid, $8,000.00.
8. There is on hand an unrecorded check (just received) for $2,000.00 covering the balance due by R. J. Lawson, a customer, whose account was written off as worthless 5 years ago.
9. One third of the net income of the period (before income taxes) is estimated as representing the liability of Mr. Speers for income taxes payable.

Required

1. Statement of income for the 9 months ended September 30, 19__, showing net income after income taxes.
2. Balance sheet, September 30, 19__.

Chapter 15

PARTNERSHIPS: INTRODUCTORY CONSIDERATIONS

Definition

The Uniform Partnership Act defines a partnership as "an association of two or more persons to carry on, as co-owners, a business for profit." This definition refers to living persons only. It follows, therefore, that a corporation cannot be a member of a partnership.

Why Partnerships Are Formed

The partnership form of business organization makes it possible to combine the capital, ability, and experience of two or more persons. Collectively the partners reason that the business of the partnership is stronger and more effective than either of their individual businesses could be.

Partnerships are common to businesses where the element of personal service is important (accounting, brokerage, insurance, and the law, for example). As a general rule, the larger the enterprise, the less likely is the partnership form of business organization to be employed. To this general rule, however, there are some conspicuous exceptions; the largest accounting and brokerage businesses in the United States, for example, are partnerships.

Nature of the Partnership

A partnership has no legal existence. When it is necessary to sue the business of a partnership the partnership, as such, cannot be sued. Instead, the partners themselves must be personally named as defendants, each of them being liable for all the debts of the business of the partnership. If, on its own part, the partnership wishes to bring action, it must sue in the names of all of the partners as individuals.

Each partner of an ordinary partnership is individually liable for all the debts of the partnership. His only recourse is against the other general

partners. In the event of his withdrawal from the partnership, a partner is not relieved of his liability for partnership debts outstanding as of the date of his withdrawal unless written releases have been procured from creditors.

A special type of partnership called "limited partnership" is provided for by the statutes of most states. In a limited partnership certain partners (but not all partners) are permitted to limit their personal liability for the debts of the partnership to the amounts which they have contributed to the capital of the partnership. A limited partnership must be formed and operated in compliance with the provisions of the limited partnership act of the state in which the partnership operates. The partnership, for instance, must have at least one general partner of unlimited liability, must file for public record in the manner specified by the limited partnership act an informative certificate of limited partnership, must advertise that it is a limited partnership, and so on. If a limited partner leads creditors to believe that he is a general partner or if he takes an active part in the management of the business of the partnership, he becomes liable as a general partner.

Each member of an ordinary partnership is a principal as well as an agent of the business of the partnership. The acts of each partner, acting for the firm and within the scope of its business, are binding upon all partners.[1] Transactions by a partner outside the usual course of the partnership business are not binding upon the other partners unless they consent to be bound;[2] such acts are, for example,

1. the sale of the partnership name,[3]
2. guarantees or accommodation endorsements,[4]
3. the transfer of a partner's interest,[5] and
4. any act that would make it impossible to carry on the ordinary business of the partnership.[6]

A partnership is easily dissolved. The most common causes of partnership dissolution are

1. by agreement of the partners to dissolve,
2. expiration of the term for which the partnership was formed,
3. completion of the enterprise,

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[1] "Every member of an ordinary partnership is its general agent for the transaction of its business in the ordinary way, and the firm is held responsible for whatever is done by its partners when acting for the firm within the limits of the authority conferred by the nature of the business it carries on. Every person is entitled to assume that each partner is impowered to do for the firm whatever is necessary for the transaction of its business, in the way in which that business is ordinarily carried on by other people."—*Pooley* v. *Whitmore* 57 Tenn. 629.

[2] 20 R.C.L. 884–885. See the Index and Glossary for the full spelling of this abbreviation and others.

[3] 20 R.C.L. 872; 908–909.

[4] 20 R.C.L. 899; 903.

[5] 20 R.C.L. 983. 47 C.J. 1020.

[6] R.C.L. 908–909. 47 C.J. 832–833.

4. impossibility of continuing the enterprise,
5. retirement or admission of a partner,
6. death of a partner, and
7. incompetency of a partner (i.e., insanity, bankruptcy, misconduct, and so on). Dissolution under these circumstances may be effected by court decree.

Formation of the Partnership

Partnerships may be formed by oral contract, by written contract, or by implied action of the partners. Beyond question, however, it is best for a partnership business to be organized upon the basis of a written contract, complete in all details, and signed by all partners. The use of legal and accounting counsel is implied.

The Partnership Contract

Among the important points to be covered in the articles of partnership are the following:

ORGANIZATION

1. Name of the partnership.
2. Partners, names and duties. May partners engage in outside business activities and, if so, to what extent?
3. Duration of the contract.
4. Nature of the business.
5. Place of business.
6. Amount of capital to be contributed by each partner. How shall the noncash assets contributed by partners be valued?
7. Apportionment of future capital contributions, if increases in capital become necessary.

OPERATION

1. Salaries, if any, to be allowed the partners.
2. Withdrawals of funds by partners. At what times and in what amounts shall withdrawals be permitted?
3. The accounting period. Shall the accounts of the business be independently audited?
4. Profits and losses. Fixed or determinable profit and loss ratios should be established for the apportionment of profits and losses among partners. (*Note:* In the absence of specification or agreement, profits and losses are divided equally.)

5. Interest on capital. Shall it be allowed? If so, at what rate, and when shall it be recorded on the books? What is the definition of capital?
6. Treatment of over- and undercontributions of capital.
7. Treatment of undrawn partners' salaries and profits. Shall they be added to partners' capital accounts?
8. Treatment of excess drawings by partners.
9. Provision for arbitration of disputes.

DISSOLUTION

1. Procedure to be followed in the event of the retirement or death of a partner.
2. Goodwill. How shall the value of the goodwill of the business be determined? How shall goodwill, if any, be apportioned? How shall the assets of the business be valued and by whom?
3. Settlement of the capital account of a retiring or deceased partner. What procedures shall be followed in making settlement?
4. Procedures to be followed when the business is to be liquidated, sold, or dissolved.

Partnership Accounting

Partnership accounting introduces three new features:

1. A capital account is maintained with each partner.
2. A personal account is maintained with each partner.
3. Profits and losses must be accurately apportioned to partners in order to establish correctly their respective capital interests.

In other respects partnership accounting is similar to accounting for the single proprietorship.

Opening the Books of a Partnership

Each partner is given a capital credit equal to the net assets he has contributed.

Example

A. C. Bryce and E. K. Burger decide that it will be mutually advantageous to consolidate their businesses under the name of Bryce & Burger. The opening entries on the partnership books are as follows (all valuations having been accepted by both partners):

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1958					
Apr.	1	Cash		25,000.00	
		Building		20,000.00	
		Land		10,000.00	
		Mortgage Payable			7,000.00
		A. C. Bryce, Capital			48,000.00
		To record the assets and liabilities representing the investment of A. C. Bryce in the partnership of Bryce & Burger formed today.			
		Cash		10,000.00	
		Accounts Receivable		40,000.00	
		Delivery Equipment		3,000.00	
		Furniture and Office Equipment		2,000.00	
		Merchandise		25,000.00	
		Accounts Payable			35,000.00
		E. K. Burger, Capital			45,000.00
		To record the assets and liabilities representing the investment of E. K. Burger in the partnership of Bryce & Burger formed today.			

Drawing Accounts

The more or less regular withdrawals of cash or merchandise by partners should be debited to the "personal" or "drawing" accounts of the partners. The function of partners' drawing accounts is identical with the function of the personal account of the owner of the business of a single proprietorship. The personal accounts of partners are debited with the following:

1. Cash, merchandise, or other assets, withdrawn by partners.
2. Payments made by the partnership for the purpose of discharging private liabilities of the partners.
3. Partnership funds collected and retained by the partners individually. (This is rare.)

They are credited with the following:

1. Partners' salaries as specified by the articles of partnership. It is well to do this regularly at the end of each month before the salary disbursements are made; this is especially desirable when salary disbursements are not made regularly. (See also page 314.)
2. Payments made by the partners as individuals for the purpose of discharging liabilities of the partnership.
3. Personal funds of partners collected and retained by the business of the partnership. (This is rare.)

At the end of each accounting period, the balances of partners' drawing accounts are commonly transferred to their related capital accounts. How-

ever, if the articles of partnership call for fixed amounts of capitals, the drawing accounts of partners should not be closed. Also, if the balances of drawing accounts are likely to be withdrawn in the near future, the drawing accounts of partners might remain open without strong objection.

As a general rule, a debit balance in a partner's drawing account, to the extent that it is greater than the partner's share of net income, or greater than the allowable drawings as specified in the articles of partnership, should be made good by the partner in question. Collections, however, may not materialize. It is very desirable, as indicated above, that the partnership agreement clearly specify the rights and obligations of partners when drawings are excessive.

On the date of a balance sheet, open balances in partners' drawing accounts appear in the net worth section of the balance sheet.

In the solution of problems calling for partnership balance sheets, debit or credit balances in partners' drawing accounts should be consolidated with partners' capital accounts (unless the problem, the partners, or the articles of partnership specify otherwise). Closing entries, if called for, should be in harmony with such consolidation.

Withdrawals of merchandise by partners are commonly charged to partners' drawing accounts at cost and credited to Purchases (or Cost of Sales). These transactions would ordinarily be recorded in the journal. Sometimes, however, when these charges occur frequently, and in order to handle them expeditiously, they are billed—at cost—and recorded in the sales book in the manner of ordinary sales. The inaccuracy injected into the total sales figure by this bookkeeping would normally not be significant because usually, in comparison with total sales, the amount of merchandise withdrawn by partners is not important. When this bookkeeping is followed, special accounts are opened with each partner in the accounts receivable ledger. At the end of each month, these partners' accounts receivable should be settled by collections in cash or their balances transferred to the regular drawing accounts of partners in the general ledger.

Partners' Advances

In addition to their specified capital investments, partners may contribute further funds to a business. Such advances may be credited in one of three ways:

1. To Capital account if such funds constitute additional capital investment.
2. To a Partners' Loan Payable account as a loan to the partnership.
3. To a Partners' Notes Payable account if the advance is evidenced by a note signed by all of the partners. The regular Notes Payable account should not be credited because this account represents note claims of those outside the partnership. The books should

differentiate between the two kinds of note claims since in all cases liabilities take precedence over proprietary claims.

Whether or not interest is to be paid on the loan which a partnership receives from one of its members and if so, how much, is a matter for agreement between the parties to the loan contract. If the parties have not expressed themselves, the general rule is "to allow interest upon the advances, although there was no express agreement by the firm to pay it, in the absence of some agreement to the contrary, express or implied. The right to interest . . . is to be implied in such cases without any express promise, as in like transactions between parties holding no partnership relations to each other."[7] Interest paid on partners' loans should be debited to Interest Expense.

Profits left by a partner with the firm are not entitled to interest except by consent of the partners of the firm.[8]

Partners' Borrowings

A partnership may advance funds to one or more of its members. Such advances may be debited in one of three ways:

1. To Capital account, if the withdrawal constitutes a permanent withdrawal of capital.
2. To a Partners' Loan Receivable account as a receivable to be collected later.
3. To a Partners' Notes Receivable account if the advance is evidenced by a note.

Whether or not interest is to be charged on loans made to partners is a matter for mutual arrangement and agreement. Unless there is an understanding to the contrary between the firm and the borrowing partner, as when a note is executed, interest may not be charged on the indebtedness of a partner to the firm.[9]

Partners' Salaries

Partners are not entitled to salaries unless salaries are specifically provided for by the articles of partnership.

Partners may expressly agree that salaries shall be allowed without indicating their purpose or their accounting, or that salaries shall be allowed for the purpose of dividing profits. In either event, salaries are purely a

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[7] *Rodgers* v. *Clement*, 162 N. Y. 422. See also *Mack* v. *Engel*, 165 Mich. 540, and *Hodges* v. *Parker*, 17 Vt. 242.

[8] *Winchester* v. *Glazier*, 152 Mass. 316.

[9] *Holden* v. *Peace*, 39 N. C. 223; *Snell* v. *Taylor*, 182 Ill. 473; *Sweeney* v. *Neeley*, 53 Mich. 421.

device of profit apportionment. (See Chapter 16, page 330.) If monthly salaries are specified, debits should be made regularly to Partners' Salaries with offsetting credits to Cash or to Partners' Drawing accounts. At the end of the accounting period, the Partners' Salaries account should be closed to Profit and Loss—not as an expense but as a partial distribution of profit.

Partners' salaries are not true business expenses. They do not affect the net income of a partnership. True economic gain or loss cannot be the result of transactions between proprietary interests.

Although it does not represent sound theory, one view on partners' salaries is quite interesting. This view holds that partners' salaries called for by the articles of partnership are expenses of doing business (i.e., a cost of management). Like any other *expense* account, therefore, Partners' Salaries should be included with the expenses of the statement of profit and loss; and closed to the Profit and Loss account.

Those who hold to this point of view argue that it accords with the thinking of practical businessmen: that reasonable partners' salaries are expense because partners' salaries are wages of management. Further, in an incorporated business, salaries of this kind are an expense of operation. It is not consistent, they say, to regard the costs of management for a partnership as a distribution of net income and to regard the costs of management for a corporation as an expense.

It is also stated that failure to regard salaries as other than operating expense is to take exception to the usual commercial concept of net profit, i.e., as that profit which remains after all expenses have been provided for, management costs included. Net profit is profit on investment and is not inclusive of earnings on services.

Were he to accept the foregoing definition of net profit, the accountant unquestionably would often have difficulty in applying it satisfactorily to specific statements of income. Partners' salaries are sometimes fixed at values which are not the fair values of managerial services but which, instead, are made proportionate to the profit-earning ability of the business or, indeed, to the personal financial needs of partners. In the interest of fairly establishing the net income of a partnership business, it would appear incumbent upon the accountant to establish the economic fair worth of the services of partners to a business. This might not be an easy thing to do, it would probably be an unwise act for the accountant, and it might be embarrassing to him. It would be futile to hope that the task of appraisal would ever become any easier in view of the fact that economic fair worths are constantly undergoing change. These difficulties, as well as expediency, support the accountant who goes no further than to determine the fairness of the net income of a business, exclusive of partners' salaries. The determination of the economic net income of a business is left to the partners themselves or to others who may be interested.

It should be well understood that partners' salaries do not represent the usual employer-employee contractual relationship. They do not represent disbursements to legal persons outside the partnership. They are not even the result of a contract between partners and nonpartners. And they are not preferred claims in the event of partnership liquidation. It is pertinent to repeat again that true accounting gain or loss for a business cannot be the result of transactions between proprietary interests.

From the foregoing it should be clear that there is no valid reason why an accountant should do other than adhere to accounting theory. He will *not* handle partners' salaries as expense. He will handle them as distributions of net income.

Closing the Books of a Partnership

The procedures followed for adjusting and closing the books of a single proprietorship are also the procedures for adjusting and closing the books of a partnership.

The balance of the Profit and Loss account is distributed to the partners in accordance with the provisions of the partnership contract.

Example

Profit and Loss	8,000.00	
A. C. Bryce, Capital		4,000.00
E. K. Burger, Capital		4,000.00
To distribute net income for 19__ to partners according to their profit and loss ratios, 50% to each.		
A. C. Bryce, Capital	3,000.00	
E. K. Burger, Capital	1,200.00	
A. C. Bryce, Drawing		3,000.00
E. K. Burger, Drawing		1,200.00
To transfer balances of drawing accounts to partners' capital accounts.		

Interest on Partners' Loans and Drawings

It is important to understand the true nature of interest which is debited or credited on partners' loans or drawings. Assume, for example, that A and B, sharing profits and losses equally, have the following balance sheet on December 31, 1957:

Assets	$50,000.00	A, Capital	$25,000.00
		B, Capital	25,000.00
	$50,000.00		$50,000.00

On January 1, 1958, B, with the consent of A, converted one half of his capital credit to the status of a 6% loan payable. For the year ended

December 31, 1958 operations of the business—excluding interest on B's loan of $12,500.00—yielded neither profit nor loss, i.e., the business "broke even" on its operations. There were no drawings, or changes in capital investments, during the year. On the basis of this data the preliminary balance sheet of the business on December 31, 1958 would be

Assets	$50,000.00	B, Loan Payable	$12,500.00
		A, Capital	25,000.00
		B, Capital	12,500.00
	$50,000.00		$50,000.00

To recognize the interest on B's loan, the following entry might be made:

Interest Expense	750.00	
B, Drawing		750.00
To record 6% interest on B's loan for 1958.		

The Interest Expense account would be closed to Profit and Loss; the balance of the latter account would be distributed to the partners by the following entry:

A, Capital	375.00	
B, Capital	375.00	
Profit and Loss		750.00
To distribute balance of Profit and Loss, 50-50.		

After giving effect to this entry the balance sheet will be

Assets	$50,000.00	B, Loan Payable	$12,500.00
		A, Capital	24,625.00
		B, Capital	12,875.00
	$50,000.00		$50,000.00

From the Profit and Loss account it might be concluded that the net loss for the year was $750.00. That this is *not* the case may be proved by the fact that the net assets have remained unimpaired at $50,000.00. The evidence of a loss would be found in a reduction of $750.00 in the net assets of the business.

SUMMARY From the foregoing discussion it follows that

1. accounting net income or loss does *not* arise as the result of transactions between the proprietary interests of a business;
2. true net income or loss is evidenced by a corresponding increase or decrease in the net assets of a business;
3. interest on partners' loan or drawing accounts and interest on deficiencies or excesses in partners' capital accounts are purely and simply procedures for adjusting the proprietary interests of the partners in the partnership business; and

4. transactions between partners and transactions with nonpartners are different in character. Transactions with partners do not contain elements of profit and loss; transactions with nonpartners do.

BOOKKEEPING PROCEDURE The foregoing summary may be commented upon by stating that interest adjustments between partners are commonly handled through the Profit and Loss account. This is done on the grounds of bookkeeping convenience and expediency. This practice is especially serviceable in cases where there are more than two partners or where the profit and loss ratios of partners are unequal.

Partnership Financial Statements

The form of the statement of income for a partnership is the same as that for a single owner in the same line of business. The statement of income for a partnership may be supplemented by a schedule showing the distribution of the net income to the accounts of partners.

Example

X and Y

STATEMENT OF INCOME FOR THE YEAR ENDED DECEMBER 31, 19__

Sales	$60,000.00
Cost of Sales	38,000.00
Gross Profit	$22,000.00
Selling and General Expenses	12,000.00
Net Profit	$10,000.00

Distribution of net profit:

Partner	*P & L Ratio*		*Net Profit*		*X*	*Y*	*Total*
X	50%	×	$10,000.00	=	$5,000.00		$ 5,000.00
Y	50%	×	$10,000.00	=		$5,000.00	5,000.00
					$5,000.00	$5,000.00	$10,000.00

The balance sheet of a partnership, likewise, is similar to the balance sheet of a single proprietorship in the same line of business, the only difference being that instead of a single capital account for the business there will be one capital account for each partner. On the balance sheet of the partnership, the capital accounts of partners should be totaled to show the net worth of the business of the partnership.

Partners may desire to have an explanation of the increase or decrease in the balances of their capital accounts at the end of an accounting period as compared with the balances of these accounts at the beginning of the period. This information is furnished by a statement of capital.

Example

X and Y

STATEMENT OF CAPITAL FOR THE YEAR ENDED DECEMBER 31, 19__

	X	*Y*	*Total*
Capital, December 31, 19__ (previous year)	$20,000.00	$25,000.00	$45,000.00
Add:			
Investments of capital in 19__	15,000.00		15,000.00
Net profit for 19__	5,000.00	5,000.00	10,000.00
	$40,000.00	$30,000.00	$70,000.00
Less			
Capital withdrawals in 19—	$ 5,000.00		$ 5,000.00
Drawings	4,000.00	$ 3,000.00	7,000.00
	$ 9,000.00	$ 3,000.00	$12,000.00
Capital, December 31, 19__ (current year)	$31,000.00	$27,000.00	$58,000.00

A statement of capital furnishes partners with information which is not readily or advantageously includible in the statement of income or the balance sheet. As a general rule only the net balance of each partner's capital account appears on the balance sheet of the business of the partnership.

PROBLEMS

Problem 15–1. X and Y form a partnership business. X invests cash of $20,000.00. Y invests securities which cost him $12,000.00 (five years ago) but which now have a market value of $22,000.00.

Required

1. What entry or entries should be made to open the books of X and Y?
2. What general principle of valuation accounting is illustrated by this problem?

Problem 15–2. A and B, conducting like businesses, decide that a consolidation of their affairs will prove to be of mutual advantage. Their condensed balance sheets, December 31, 1958, are

	A	*B*
Cash	$ 20,000.00	$ 40,000.00
Notes Receivable	6,000.00	5,000.00
Accounts Receivable	44,000.00	38,000.00
Merchandise Inventory	29,000.00	35,000.00
Delivery Equipment	6,000.00	5,000.00
Furniture, Fixtures, Office Equipment	5,000.00	4,000.00
	$110,000.00	$127,000.00
Accounts Payable	$ 20,000.00	$ 17,000.00
Notes Payable	25,000.00	10,000.00
A, Capital	65,000.00	
B, Capital		100,000.00
	$110,000.00	$127,000.00

In organizing the new partnership, A and B agree that the above balance sheet values are to be used except for the following revaluations of three of A's assets:

Accounts Receivable	$40,000.00
Merchandise Inventory	30,000.00
Furniture, Fixtures, Office Equipment	3,000.00

Required

What entries should be made to open the books of the new partnership?

Problem 15–3. On December 31, 19__, the following account appeared in the ledger of Mitchell & Sands, a partnership:

F. H. MITCHELL, DRAWING

19__					19__			
Jan.	10	CP1	200.00		Jan.	31	J1	500.00
	31	CP2	300.00		Feb.	28	J2	500.00
Feb.	28	CP4	500.00		Mar.	31	J4	500.00
Mar.	20	CP6	600.00		Apr.	30	J5	500.00
June	30	CP12	1,400.00		May	31	J6	500.00
July	31	CP13	500.00		June	30	J8	500.00
Aug.	31	CP15	500.00		July	31	J9	500.00
Sept.	12	CP16	500.00		Aug.	31	J10	500.00
					Sept.	30	J12	500.00
					Oct.	31	J13	500.00
					Nov.	30	J15	500.00
					Dec.	31	J18	500.00

Each of the $500.00 credits in this account was based on the following entry in the journal:

Partners' Salaries	500.00	
F. H. Mitchell, Drawing		500.00
To record salary allowance for the month of _____, as per articles of partnership.		

Disbursements in payment of partners' salaries were debited to partners' drawing accounts, as appropriate.

Required

1. What is the meaning of the credit balance in this account, $1,500.00?
2. How should the balance of this account be handled in the financial statements for the year ended December 31, 19__?

Problem 15–4. C and D formed a partnership, each agreeing to contribute $50,000.00 of capital. It was agreed, also, that if any partner's

actual capital was less than $50,000.00, a charge should be made against the personal account of the partner for an amount equal to 10% of the deficiency in capital.

At the end of the first year of operations, the actual capital investments were C, $50,000.00; D, $40,000.00. The condensed trial balance on this date, December 31, 19__, was

Sundry Assets	$ 95,000.00	
C, Capital		$ 50,000.00
D, Capital		40,000.00
Sales		100,000.00
Cost of Sales	60,000.00	
Selling Expenses	18,000.00	
General Expenses	17,000.00	
	$190,000.00	$190,000.00

Required

1. What entry should be made to record the 10% charge against D? Does this item constitute genuine income to the partnership?
2. Prepare a statement of income for the year and a balance sheet, December 31, 19__.

Problem 15–5. Following are two condensed statements of income intended to cover the operations of Doyle & Scott for the past calendar year:

Sales		$100,000.00	Sales	$100,000.00
Cost of Sales		50,000.00	Cost of Sales	50,000.00
Gross Profit		$ 50,000.00	Gross Profit	$ 50,000.00
Operating Expenses	$25,000.00		Operating Expenses	25,000.00
Partners' Salaries	20,000.00	45,000.00		
Net Profit		$ 5,000.00	Net Profit	$ 25,000.00

Required

1. Which of the two statements above should be approved? Why? Assume that the services of the partners to the business are reasonably worth $20,000.00—each partner, $10,000.00.
2. If you fairly appraise the value of the services of the partners to the business to be $10,000.00—each partner, $5,000.00,—how would this appraisal affect your preparation of the income statement for the year?

Problem 15–6. The condensed trial balance of Clark & Jenkins on December 31, 19__, was

Cash	$ 52,000.00	
Accounts Receivable	75,000.00	
Allowance for Bad Debts		$ 5,000.00
Merchandise Inventory	40,000.00	
Equipment and Fixtures	5,000.00	
Allowance for Depreciation		2,000.00
Accounts Payable		20,000.00
John R. Clark, Capital		60,000.00

Henry B. Jenkins, Capital		40,000.00
Sales		235,000.00
Sales Discounts	10,000.00	
Purchases	95,000.00	
Purchases Discounts		5,000.00
Freight In	5,000.00	
Advertising Expense	20,000.00	
Miscellaneous Selling Expense	5,000.00	
Sales Salaries	20,000.00	
Traveling Expense	5,000.00	
Bad Debts Expense	5,000.00	
Depreciation Expense	500.00	
General Expense	7,500.00	
Rent Expense	7,000.00	
General Salaries	15,000.00	
	$367,000.00	$367,000.00

In their partnership contract, the partners agreed to share profits as follows: (1) salaries were to be allowed, Clark, $10,000.00, and Jenkins, $6,000.00. (2) Remainder profits were to be divided equally.

Required

1. Statement of income for the year ended December 31, 19__. Inventory, December 31, 19__, $30,000.00.
2. Balance sheet, December 31, 19__.
3. Statement of capital for the year ended December 31, 19__. This statement should be supported by an itemized schedule showing the distribution of the year's net income to partners' accounts.

Problem 15–7. Following are the condensed balance sheets of the proprietorships of X and Y on December 31, 19__:

Assets	*X*	*Y*
Cash	$15,000.00	$11,000.00
Accounts Receivable		24,000.00
Marketable Securities	3,000.00	
Merchandise Inventory		20,000.00
	$18,000.00	$55,000.00
Equities		
Accounts Payable		$ 7,000.00
X, Capital	$18,000.00	
Y, Capital		48,000.00
	$18,000.00	$55,000.00

On the day following the date of these balance sheets, January 1, 19__, the two proprietors combined their businesses to form the partnership of X and Y. For this purpose, all of the assets and liabilities of the two businesses were taken over by the partnership. The partners agreed, however, that the noncash assets were to be assumed by the partnership at the following valuations: accounts receivable, $21,000.00; marketable securties, $10,000.00; merchandise, $25,000.00.

During the first 12 months of its existence, the partnership had the following condensed transactions: sales on account, $100,000.00; purchases on account, $50,000.00; expenses (credit Accounts Payable), $12,000.00; collections on accounts receivable, $99,000.00; accounts payable paid, $49,000.00; partners' salaries paid, X, $10,000.00, and Y, $20,000.00. (*Note:* Partners' salaries represent a partial distribution of the profits of the business.) Accounts receivable of $3,000.00 were written off.

Required

1. Entries to open the books of the partnership of X and Y.
2. Record the year's transactions in appropriate T accounts.
3. Statement of income for the year ended December 31, 19__. Inventory, December 31, 19__, $10,000.00.
4. Balance sheet, December 31, 19__.
5. Statement of capital for the year ended December 31, 19__.

Chapter 16 PARTNERSHIPS: DIVISION OF PROFITS AND LOSSES

Introduction

The profits and losses of a partnership may be divided according to any one of the following bases:

1. Equally. If the partnership contract is silent concerning the profit and loss ratio, it is the presumption of the law that the profits and losses of the business of a partnership are to be divided equally among the partners.
2. According to agreed ratios.
3. According to capital ratios.
4. Interest on capital at an agreed per cent, remaining profits divided equally, or as agreed.
5. Salaries to partners, remaining profits divided equally, or as agreed.
6. Salaries to partners, interest on capital, remaining profits divided equally, or as agreed.

The articles of partnership should state, specifically, the procedures by which the profits and losses of the business are to be divided. The examples which follow on pages 325–331 illustrate the division of the net income of a partnership according to each of the several methods listed above. In each case the illustration begins with the following condensed ledger of A and B for the year ended December 31, 19__:

CASH	
53,700.00	

A, CAPITAL	
	30,000.00

A, DRAWING	
2,400.00	

B, CAPITAL	
	20,000.00

B, DRAWING	
2,100.00	

PROFIT AND LOSS	
	8,200.00

In each of the examples below, the Profit and Loss account and the drawing accounts of partners are closed to partners' capital accounts with

the understanding that express approval to this procedure has been given by the articles of partnership or by the partners themselves.

Profits Divided Equally

Closing entries under this method would be

Profit and Loss	8,200.00	
A, Capital		4,100.00
B, Capital		4,100.00
To divide the profits equally.		
A, Capital	2,400.00	
B, Capital	2,100.00	
A, Drawing		2,400.00
B, Drawing		2,100.00
To transfer drawing account balances to capital accounts.		

Profits Divided According to Agreed Ratios

If A and B had agreed to share profits 70% and 30%, respectively, the closing entries would be

Profit and Loss	8,200.00	
A, Capital		5,740.00
B, Capital		2,460.00
To divide the profits, 70% to A, and 30% to B.		
A, Capital	2,400.00	
B, Capital	2,100.00	
A, Drawing		2,400.00
B, Drawing		2,100.00
To transfer drawing account balances to capital accounts.		

Profits Divided According to Capital Ratios

The division of profits according to capital ratios implies that profits are realized chiefly through capital. The word "capital" may mean

1. original capital investment,
2. capital at the beginning of the accounting period,
3. capital at the end of the accounting period, or
4. average capital invested during the accounting period.

Four capital ratios are therefore possible, each of which is illustrated herewith.

I. Profits divided in ratio of original capital investments

If, under this method, A and B had started in business with capitals of $24,000.00 and $16,000.00, respectively, they would have shared profits as follows:

Profit and Loss	8,200.00	
A, Capital		4,920.00
B, Capital		3,280.00
To divide the profits, 24/40 to A, 16/40 to B.		
A, Capital	2,400.00	
B, Capital	2,100.00	
A, Drawing		2,400.00
B, Drawing		2,100.00
To transfer drawing account balances to capital accounts.		

II. Profits divided in ratio of capitals at beginning of period

On January 1, 19__, A and B had capital credits of $25,000.00 and $20,000.00 respectively. On December 31, 19__, accordingly, the profits would be apportioned

Profit and Loss	8,200.00	
A, Capital		4,555.56
B, Capital		3,644.44
To divide the profits 25/45 to A, and 20/45 to B.		
A, Capital	2,400.00	
B, Capital	2,100.00	
A, Drawing		2,400.00
B, Drawing		2,100.00
To transfer drawing account balances to capital accounts.		

III. Profits divided in ratio of capitals at end of period

Under this plan closing entries would be

Profit and Loss	8,200.00	
A, Capital		4,920.00
B, Capital		3,280.00
To divide the profits, 30/50 to A, and 20/50 to B.		
A, Capital	2,400.00	
B, Capital	2,100.00	
A, Drawing		2,400.00
B, Drawing		2,100.00
To transfer drawing account balances to capital accounts.		

IV. Profits divided according to average capitals invested during period

To divide profits according to this method, the average capital employed in the business by each partner during the year must be computed. Assume that the capital accounts of A and B for 19__ were as follows:

A, CAPITAL

19__		19__	
Jan. 31	10,000.00	Jan. 1 Bal.	25,000.00
		June 30	5,000.00
		July 31	8,000.00
		Nov. 1	2,000.00

B, CAPITAL

19__		19__	
Feb. 1	2,000.00	Jan. 1 Bal.	20,000.00
June 30	10,000.00	Apr. 30	4,000.00
Aug. 31	2,000.00	Nov. 30	10,000.00

A's average capital would be computed as follows:

Capital Invested		*Months Investment Remained Unchanged*	*Equivalent Investment for One Month*
January 1 to January 31	$25,000.00	1	$ 25,000.00
February 1 to June 30	15,000.00	5	75,000.00
July 1 to July 31	20,000.00	1	20,000.00
August 1 to October 31	28,000.00	3	84,000.00
November 1 to December 31	30,000.00	2	60,000.00
Number of months in period		12	
Total equivalent investment for one month			$264,000.00

Average investment for the year = $264,000.00 ÷ 12 = $22,000.00

B's average capital would be (computation condensed):

$20,000.00 × 1 =	$ 20,000.00
18,000.00 × 3 =	54,000.00
22,000.00 × 2 =	44,000.00
12,000.00 × 2 =	24,000.00
10,000.00 × 3 =	30,000.00
20,000.00 × 1 =	20,000.00
12)	$192,000.00
	$ 16,000.00 = Average capital

Based upon these calculations, closing entries to distribute the profit of the year would be as follows:

Profit and Loss	8,200.00	
A, Capital		4,747.37
B, Capital		3,452.63
To divide the profits in average capital ratios, 22/38 to A, 16/38 to B.		
A, Capital	2,400.00	
B, Capital	2,100.00	
A, Drawing		2,400.00
B, Drawing		2,100.00
To transfer drawing account balances to capital accounts.		

The student should observe that the same allocation of profit would have resulted if the ratios 264,000/456,000 and 192,000/456,000 had been applied against the $8,200.00 profit figure. It is not necessary, therefore, to calculate the average capitals in order to obtain the correct average capital ratios for the year.

Where withdrawals and additions of capital are made during a month, it is more accurate to calculate the average investment on the basis of days rather than months. That is, each investment is multiplied by the number of days it remains unchanged; total day-dollars divided by total days give the average investment for the period.

Profits Divided by Allowing Interest on Capital, Balance Divided According to Agreement

This method divides a part of the profits according to capital ratios and the remaining part according to agreement.

A and B agree to divide profits 60% and 40%, respectively, after 6% interest has been allowed on the balances of capital accounts at the beginning of the fiscal period.

To expedite consideration of this and later problems, the ledger of A and B on December 31, 19__, is reproduced from page 324.

CASH		A, CAPITAL		A, DRAWING	
53,700.00			30,000.00	2,400.00	

B, CAPITAL		B, DRAWING		PROFIT AND LOSS	
	20,000.00	2,100.00			8,200.00

The entries of A and B on December 31, 19__, would be

Profit and Loss	2,700.00	
A, Capital		1,500.00
B, Capital		1,200.00
To credit partners' capital accounts with 6% interest on capital investments at beginning of period (see page 326).		
6% × $25,000.00 = $1,500.00		
6% × $20,000.00 = $1,200.00		
Profit and Loss	5,500.00	
A, Capital		3,300.00
B, Capital		2,200.00
To distribute remaining balance in Profit and Loss account, 60% to A, and 40% to B.		
A, Capital	2,400.00	
B, Capital	2,100.00	
A, Drawing		2,400.00
B, Drawing		2,100.00
To transfer drawing account balances to capital accounts.		

Special Case 1

Suppose that instead of a credit balance of $8,200.00, the Profit and Loss account carried a credit balance of only $1,200.00. This balance is less than 6% interest on the combined capitals. How shall the profits be divided? The correct entries would be

Profit and Loss	2,700.00	
A, Capital		1,500.00
B, Capital		1,200.00
To credit partners' capital accounts with 6% interest on capital investments at beginning of period.		

A, Capital	900.00	
B, Capital	600.00	
Profit and Loss		1,500.00

To distribute remaining balance (debit) in the Profit and Loss account, 60% to A, and 40% to B.

A, Capital	2,400.00	
B, Capital	2,100.00	
A, Drawing		2,400.00
B, Drawing		2,100.00

To transfer drawing account balances to capital accounts.

In other words, the final net effect of the above entries is to distribute the net profit of $1,200.00: $600.00 to A, and $600.00 to B.

Special Case 2

Suppose that operations for the year had resulted in a net loss and that, accordingly, the Profit and Loss account had a debit balance of $1,600.00. The entries to be made in this case are as follows:

Profit and Loss	2,700.00	
A, Capital		1,500.00
B, Capital		1,200.00

To credit partner's capital accounts with 6% interest on capital investments at beginning of period.

A, Capital	2,580.00	
B, Capital	1,720.00	
Profit and Loss		4,300.00

To distribute remaining debit balance in the Profit and Loss account, 60% to A, and 40% to B.

A, Capital	2,400.00	
B, Capital	2,100.00	
A, Drawing		2,400.00
B, Drawing		2,100.00

To transfer drawing account balances to capital accounts.

In other words, the final net effect of the above entries is to distribute the net loss of $1,600.00: $1,080.00 to A, and $520.00 to B.

Although interest in these three illustrations has been computed on capital balances at the beginning of the accounting period, it might have been calculated on any one of the three other capital bases:

1. Original capital investment
2. Capital at the end of the accounting period
3. Average capital invested during the accounting period

Obviously, the partnership contract should define the capital base upon which interest is to be computed. In the absence of this specification, the logical base to use would be the average capital invested by each partner during an accounting period. Average capital, in turn, would be based upon the values contained in partners' capital accounts.

The debit made to the Profit and Loss account to record the amount of interest allowed to partners on their respective capitals is *not* interest expense. The debit is purely and simply a *partial distribution of profit.* It is important that this point be clearly understood.

Profits Divided by Allowing Salaries to Partners, Balance Divided According to Agreement

A and B, in their partnership contract, agree that annual profits and losses are to be divided as follows:

1. Annual salaries: A, $5,000.00; B, $3,000.00.
2. Remaining balance in the Profit and Loss account to be divided equally.

In accordance with these provisions, the entries of A and B on Decem- 31, 19__, would be

Profit and Loss	8,200.00	
A, Capital		5,100.00
B, Capital		3,100.00
To divide the net profit of the year, $8,200.00, as follows:		

	APPORTIONMENT OF PROFIT TO		
	A	*B*	*Profit*
Annual salaries	$5,000.00	$3,000.00	$8,000.00
Balance of profit 50–50	100.00	100.00	200.00
	$5,100.00	$3,100.00	$8,200.00

A, Capital	2,400.00	
B, Capital	2,100.00	
A, Drawing		2,400.00
B, Drawing		2,100.00
To transfer balances of drawing accounts to capital accounts.		

Profits Divided by Allowing Salaries to Partners, Interest on Capitals, Balance Divided According to Agreement

An excellent application of this method is to fix each partner's salary at an amount reasonably commensurate with the worth of the partner's services to the business, to allow a reasonable rate of interest on partners' capital accounts to compensate for unequal capital investments, and then, having provided compensation for personal services and invested capital, to divide all remaining profits equally.

For example, A and B, in their partnership contract, agree that annual profits and losses are to be divided as follows:

1. Annual salaries: A, $5,000.00, B, $3,000.00.
2. Interest, at the rate of 6% annually, on capital investments at the beginning of a current accounting period.
3. Remaining balance in the Profit and Loss account to be divided equally.

In accordance with these provisions, the entries of A and B on December 31, 19__, would be

Profit and Loss	8,200.00	
A, Capital		5,250.00
B, Capital		2,950.00

To divide the net profit of the year, $8,200.00, as follows:

	APPORTIONMENT OF PROFIT TO		
	A	*B*	*Profit*
Annual salaries	$5,000.00	$3,000.00	$8,000.00
Interest on capital	1,500.00	1,200.00	2,700.00
Balance of profit 50–50	(1,250.00)	(1,250.00)	(2,500.00)
	$5,250.00	$2,950.00	$8,200.00

A, Capital	2,400.00	
B, Capital	2,100.00	
A, Drawing		2,400.00
B, Drawing		2,100.00

To transfer balances of drawing accounts to capital accounts.

Statement of Capital

Based on the data of the preceding section, the statement of capital (including a detailed presentation of the distribution of net income) for the business of A and B would be as follows:

A and B

STATEMENT OF CAPITAL FOR THE YEAR ENDED DECEMBER 31, 19__

	A	*B*	*Total*
Capital, December 31, 19__ (previous year)	$25,000.00	$20,000.00	$45,000.00
Add:			
Capital added in 19__	$15,000.00	$14,000.00	$29,000.00
Profit for 19__:			
Salaries to partners	$ 5,000.00	$ 3,000.00	$ 8,000.00
Interest on capital	1,500.00	1,200.00	2,700.00
Balance of profit	(1,250.00)	(1,250.00)	(2,500.00)
	$ 5,250.00	$ 2,950.00	$ 8,200.00
Total credits	$45,250.00	$36,950.00	$82,200.00
Less:			
Capital withdrawn in 19__	$10,000.00	$14,000.00	$24,000.00
Drawings	2,400.00	2,100.00	4,500.00
Total debits	$12,400.00	$16,100.00	$28,500.00
Capital, December 31, 19— (current year)	$32,850.00	$20,850.00	$53,700.00

PROBLEMS

Problem 16–1. A and B share profits according to their average capital ratios. Three of their ledger accounts, December 31, 19__, were

A, CAPITAL

19__			19__		
June 1		8,000.00	Jan. 1	Balance	44,000.00
Sept. 1		10,000.00	Mar. 1		12,000.00
			Oct. 1		12,000.00

B, CAPITAL

19__			19__		
May 1		16,000.00	Jan. 1	Balance	100,000.00
July 1		4,000.00	Oct. 1		30,000.00
Sept. 1		10,000.00			

PROFIT AND LOSS

			19__		
			Dec. 31	Balance	21,075.00

Required

What entry or entries should be made to distribute the net income of the year to the partners?

Problem 16–2. What is the average capital of the following account for the year 19__?

M. G. HILL, CAPITAL

19__			19__		
July 7		10,000.00	Jan. 1	Balance	36,000.00
Aug. 10		2,000.00	Feb. 14		4,000.00
			Oct. 11		20,000.00

Problem 16–3. The condensed trial balance of Drake & Safford, December 31, 19__, is

Sundry Assets	$290,000.00	
Sundry Liabilities		$ 30,000.00
M. V. Drake, Capital		165,000.00
M. V. Drake, Drawing	10,000.00	
J. D. Safford, Capital		60,000.00
J. D. Safford, Drawing	5,000.00	
Sales		320,000.00
Cost of Sales	200,000.00	
Operating Expenses	70,000.00	
	$575,000.00	$575,000.00

The partnership agreement provides for the following distribution of the annual net income of the business:

1. Annual salaries shall be Drake, $7,000.00; Safford, $12,000.00.
2. Interest at the rate of 10% annually shall be allowed on average capitals.
3. Any remaining profit shall be divided equally.

The only entry made in the capital accounts of the partners during the current year was a credit to M. V. Drake, $45,000.00, representing an additional investment of capital by this partner, April 1.

Required

1. Balance sheet, December 31, 19__.
2. Statement of capital for the year ended December 31, 19__. The distribution of net income for the year should be shown in detail.

Problem 16–4. In T-account form, the condensed ledger of A, B, and C at the end of 1958 was as follows:

ASSETS		LIABILITIES		PROFIT AND LOSS	
100,000.00			24,420.00		10,200.00

A, CAPITAL				B, CAPITAL			
May 1	12,000.00	Jan. 1	37,000.00	Apr. 1	5,000.00	Jan. 1	57,000.00
				Sept. 1	9,750.00	July 1	4,000.00

A, DRAWING		B, DRAWING	
2,720.00		3,150.00	

The partners agreed that profits and losses were to be divided as follows:

1. Interest at the rate of 6% annually was to be allowed on average capitals.
2. Annual salaries were to be A, $3,600.00; B, $2,400.00; C, $1,200.00.
3. Remaining profits were to be divided equally.

Required

1. Balance sheet, December 31, 1958.
2. Statement of capital for the year ended December 31, 1958.
3. If, under other circumstances, a debit balance had resulted in C's capital account, how would this account appear on the balance sheet?

Problem 16–5. Following is the trial balance of a partnership doing business as the Crown Sales Company:

Crown Sales Company

TRIAL BALANCE, DECEMBER 31, 1958

Cash	$ 33,000.00	
Accounts Receivable	68,000.00	
Merchandise Inventory	37,900.00	
Accounts Payable		$ 6,800.00
A. B. Anderson, Capital		40,000.00
A. B. Anderson, Drawing	7,000.00	
L. T. Bowman, Capital		50,000.00
L. T. Bowman, Drawing	7,500.00	
G. S. Clark, Capital		60,000.00
G. S. Clark, Drawing	13,000.00	
Sales		491,500.00
Sales Discounts	2,160.00	
Purchases	352,770.00	
Freight In	12,850.00	
Selling Expenses	71,080.00	
General Expenses	43,040.00	
	$648,300.00	$648,300.00

The partnership agreement provides that profits shall be divided as follows:

1. Interest shall be allowed at the rate of 5% per annum on the opening balances in partners' capital accounts.
2. Annual salaries shall be Anderson, $10,000.00; Bowman, $5,000.00; Clark, $5,000.00.
3. Remaining profit shall be divided: Anderson, 1/6; Bowman, 1/3; Clark, 1/2.

Required

Balance sheet, December 31, 1958. Inventory December 31, 1958, $25,800.00.

Problem 16–6. The books of A and B have been closed for the year ended December 31, 19__, with the exception of providing for partners' salaries, and interest on capital. The only open accounts on the ledger are:

Sundry Assets	$85,200.00	
Sundry Liabilities		$15,000.00
A, 6% Loan Payable		10,000.00
A, Capital		20,000.00
A, Drawing	1,000.00	
A, Salary	3,000.00	
B, Capital		30,000.00
B, Drawing	3,000.00	
Profit and Loss		17,200.00
	$92,200.00	$92,200.00

Interest on A's loan has been paid in full to date.

Among other things, the partnership contract contains these provisions:

1. Each partner is entitled to draw a salary of $300.00 per month.
2. In addition to their salaries, partners may make drawings not to exceed $200.00 per month.
3. Interest is to be allowed on capital (A, $20,000.00; B, $30,000.00) at the annual rate of 6%.
4. Remaining profits and losses are to be divided: A, 60%; B, 40%.

Required

Balance sheet, December 31, 19__.

Problem 16–7. If, in the trial balance of Problem 16–6, the credit balance of the Profit and Loss account had been $8,200.00, what would be the balance sheet, December 31, 19__? Under this set of conditions the balance of the Sundry Assets account will be $76,200.00.

Problem 16–8. If, in the trial balance of Problem 16–6, the debit balance of the Profit and Loss account had been $4,800.00, what would be the balance sheet, December 31, 19__? Under this set of conditions the balance of the Sundry Assets account will be $63,200.00.

Problem 16–9. Following is the condensed trial balance of the A, B, C partnership on December 31, 19__:

Miscellaneous Assets	$111,000.00	
Miscellaneous Liabilities		$ 22,000.00
A, Capital		38,000.00
A, Drawing	5,000.00	
B, Capital		30,000.00
B, Drawing	3,000.00	
C, Capital		32,000.00
C, Drawing	4,000.00	
Sales		92,000.00
Merchandise Inventory	10,000.00	
Purchases	45,000.00	
Purchases Discounts		1,000.00
Selling Expenses	11,000.00	
General Expenses	9,000.00	
Management Salaries (A, $3,000.00; B, $4,000.00; C, $5,000.00)	12,000.00	
Fire Loss	5,000.00	
	$215,000.00	$215,000.00

Required

1. Statement of income for the year ended December 31, 19__. Inventory, December 31, 19__, $11,000.00.
2. Balance sheet, December 31, 19__. (*Note:* It was mutually agreed that 5% annual interest was to be allowed on partners' end-of-the-year capitals: A, $38,000.00; B, $30,000.00; and C, $32,000.00. The profit and loss ratios of the partners were A, 40%; B, 30%; and C, 30%.)
3. Statement of partners' capitals for the year ended December 31, 19__. During the year A withdrew $12,000.00 of capital. This was in addition to his personal drawings of $5,000.00.

Problem 16–10. With the exception of providing for interest on B's loan, the accounts of the partnership of A and B have been closed for the year ended December 31, 19__, as follows:

ASSETS

137,830.00	

B, LOAN

		July 1	25,000.00

A, CAPITAL

Sept. 1	5,000.00	Jan. 1	40,000.00
Oct. 31	10,000.00	July 15	25,000.00

B, CAPITAL

June 1	5,000.00	Jan. 1	20,000.00
Sept. 1	2,500.00	Apr. 1	15,000.00
		July 1	10,000.00
		Oct. 1	7,500.00

A, DRAWING

2,000.00	

B, DRAWING

PROFIT AND LOSS

	25,830.00

PARTNERS' SALARIES

6,000.00	

The partnership contract contains these provisions:

1. Partners' salaries shall be $6,000.00 each to A and B. Salaries may be drawn by partners in equal monthly payments of $500.00.
2. In addition to their salaries, partners may draw against profits at the rate of $250.00 per month.
3. Interest at the annual rate of 6% shall be allowed on loans by partners to the firm.
4. Interest at the annual rate of 8% shall be allowed on average capitals employed during each calendar year.
5. Except as provided above, profits and losses are to be shared: A, 60%; B, 40%.

Required

1. Journal entries to close the books. During the year 19__ partner A actually drew his full salary of $6,000.00; B did not draw his salary.
2. Balance sheet, December 31, 19__.

Problem 16–11. Following is the trial balance of Frantz & Wilcox on December 31, 19__, after giving effect to adjusting entries:

Cash	$ 5,838.00	
Accounts Receivable	13,000.00	
Notes Receivable	2,900.00	
Notes Receivable Discounted		$ 900.00
Merchandise Inventory	20,000.00	
Prepaid Expenses	450.00	
Delivery Equipment	3,000.00	
Allowance for Depreciation—Delivery Equipment		1,250.00

Office Equipment	4,300.00	
Allowance for Depreciation—Office Equipment		1,000.00
Building (new)	12,000.00	
Land	3,000.00	
Accounts Payable		15,450.00
Notes Payable		1,000.00
Mortgage Payable		5,000.00
J. N. Frantz, Capital		15,000.00
J. N. Frantz, Personal	4,200.00	
A. L. Wilcox, Capital		28,600.00
A. L. Wilcox, Personal	8,000.00	
Sales		144,000.00
Returned Sales	2,000.00	
Sales Discounts	2,000.00	
Purchases	114,000.00	
Returned Purchases		1,400.00
Purchases Discounts		5,000.00
Freight In	1,000.00	
Advertising Expense	1,000.00	
Delivery Expense	600.00	
Depreciation Expense—Delivery Equipment	750.00	
Depreciation Expense—Office Equipment	430.00	
General Expense	700.00	
General Salaries	6,000.00	
Miscellaneous Sales Expense	2,500.00	
Sales Salaries	7,200.00	
Taxes	600.00	
Traveling Expense	2,400.00	
Utilities Expense	750.00	
Interest Income		438.00
Interest Expense	420.00	
	$219,038.00	$219,038.00

Additional Information

1. The partnership contract calls for annual salaries to the partners: Frantz, $6,000.00, and Wilcox, $10,000.00. These salaries are to be handled as a partial distribution of the profits of the business.
2. After allowance of 8% interest per annum on capital investments at the beginning of the accounting period, profits are to be shared as follows: Wilcox, 60%, and Frantz, 40%.

Required

1. Statement of income for the year ended December 31, 19__. Merchandise inventory, December 31, 19__, $32,000.00.
2. Balance sheet, December 31, 19__.
3. Statement of capital for the year ended December 31, 19__, including a detailed distribution of the year's income to partners' accounts.

Chapter 17

PARTNERSHIPS: FORMATION AND DISSOLUTION

PROBLEMS OF FORMATION

The entries to be made upon the books of a partnership when a new partner is admitted depend upon the terms under which a new partner receives entry to the business. These terms may be classified into the following accounting situations:

I. Where capital is not contributed to the partnership by the new partner

CASE I–1: The new partner receives a share in the profits only.
CASE I–2: The new partner purchases part, or all, of the interest of one of the old partners.

II. Where capital is contributed to the partnership by the new partner

CASE II–1: No allowance is made for goodwill.
CASE II–2: Goodwill may be credited either to
a) the old partners, or to
b) the new partner.
CASE II–3: Instead of crediting any of the partners with good will, a capital bonus may be credited either to
a) the old partners, or to
b) the new partner.

Illustrations of each of these cases will now be given. Each example begins with the assumption that A and B, in partnership, have capitals of $9,000.00 and $15,000.00, respectively, and that profits and losses are shared equally.

CASE I–1: *The new partner receives a share in the profits only*

A and B admit C to partnership. C is to receive one third of the profits. Although C is not required to make any investment of capital, he is entitled to leave part, or all, of his profits in the business and thereby build up a capital interest.

No accounting entries are necessary here. It is well, however, to make a memorandum in the journal to the effect that a new partnership has been formed, and to describe the accounting features of the new agreement.

CASE I–2: *The new partner purchases part, or all, of the interest of one of the old partners*

B, with the consent of A, sells his interest in the business to C.
This is a purely personal transaction between B and C. Irrespective of the consideration which C pays to B, the books will show only that B's capital interest has now become the capital interest of C:

B, Capital	15,000.00	
C, Capital		15,000.00
To record the purchase of B's interest by C.		

In these two examples, CASE I–1 and CASE I–2, the amount of capital invested in the business does not change. In the examples which follow, the capital invested in the business is *increased*.

CASE II–1: *No allowance is made for goodwill*

A and B admit C to a one-third interest in the business by the investment of $12,000.00 cash. Total capital to be $36,000.00.

Since the total capital of the new partnership is to be $36,000.00, and since A and B together have $24,000.00, or two thirds, C's capital credit is obviously the amount of his contribution:

Cash	12,000.00	
C, Capital		12,000.00
To record investment by new partner, C, for a one-third interest in the capital and profits of the partnership.		

CASE II–2–(a): *Goodwill is credited to the old partners*

Successful operation of a business may provide it with a sales value in excess of the current value of the net assets of the balance sheet. This excess is called goodwill. It is an intangible asset obviously belonging to those who have developed it.

A and B admit C to a one-third interest in the business by the investment of $15,000.00. Total capital to be $45,000.00.

In this case it is clear that C is entitled to a capital credit of one third of $45,000.00:

Cash	15,000.00	
C, Capital		15,000.00
To record investment by new partner, C, for a one-third interest in the capital and profits of the partnership.		

At this point the net assets of the partnership, as represented by the partners' capital accounts, are

A	$ 9,000.00	
B	15,000.00	
C	15,000.00	$39,000.00
which means that the goodwill must be		6,000.00
if the total capital is to be		$45,000.00

In other words, the business of A and B, which was capitalized at $24,000.00, is really worth more, i.e., $30,000.00. This difference, goodwill, belongs to A and B and is divided according to their profit and loss ratios:

Goodwill	6,000.00	
A, Capital		3,000.00
B, Capital		3,000.00

To credit A and B with the goodwill of their business.

After this entry has been posted, the capital accounts of the partners, as finally adjusted, will be

A, CAPITAL	B, CAPITAL	C, CAPITAL		TOTAL AGREED CAPITAL
9,000.00	15,000.00	15,000.00	=	$45,000.00
3,000.00	3,000.00			

CASE II–2–(b): *Goodwill is credited to the new partner*

A and B admit C to a one-third interest by the investment of $9,000.00. Total capital to be $36,000.00.

In this case C is entitled to a capital credit of one third of $36,000.00, or $12,000.00. The difference between this figure and C's cash contribution of $9,000.00 is the measure of the additional value, the goodwill, brought into the business by C. The correct entry to record C's admission to partnership is

Goodwill	3,000.00	
Cash	9,000.00	
C, Capital		12,000.00

To record investment by new partner, C, for a one-third interest in the capital and profits of the partnership.

After this entry has been posted, the capital accounts of the partners will be:

A, CAPITAL	B, CAPITAL	C, CAPITAL		TOTAL AGREED CAPITAL
9,000.00	15,000.00	12,000.00	=	$36,000.00

CASE II–3–(a): *A capital bonus is allowed the old partners*

A and B admit C to a one-third interest in the business by a cash investment of $15,000.00. Total capital to be $39,000.00.

This is virtually the same as Case II–2–(a). The difference is that, instead of a total capital of $45,000.00, the capital is to be $39,000.00, the amount of the net tangible assets of the partnership. This means, in turn, that goodwill is not to be placed upon the books.

C is entitled to a capital credit of one third of $39,000.00, or $13,000.00. He therefore pays $15,000.00 cash for a $13,000.00 interest in the partnership. The difference of $2,000.00 is a bonus to the old partners. The entry to admit C is

Cash	15,000.00	
A, Capital		1,000.00
B, Capital		1,000.00
C, Capital		13,000.00
To record $15,000.00 investment by new partner, C; $2,000.00 to be credited as bonus to A and B. C to have an interest of one third in the capital and profits of the partnership.		

After this entry has been posted, the capital accounts of the partners will be

A, CAPITAL	B, CAPITAL	C, CAPITAL		TOTAL AGREED CAPITAL[1]
9,000.00	15,000.00	13,000.00	=	$39,000.00
1,000.00	1,000.00			

[1] Another way of looking at this problem is to reason that if C is willing to pay $15,000.00 for a one-third interest in the business, the whole business must be worth $45,000.00. Since the tangible assets total $39,000.00, the goodwill must be $6,000.00, a value belonging to A and B. If the goodwill were recognized on the books by the entry

Goodwill	6,000.00	
A, Capital		3,000.00
B, Capital		3,000.00
To credit A and B with the goodwill of their business.		

the accounts of the partnership would be

GOODWILL	OTHER ASSETS
6,000.00	39,000.00

A, CAPITAL	B, CAPITAL	C, CAPITAL
9,000.00	15,000.00	15,000.00
3,000.00	3,000.00	

But the partners, being conservative, do not desire to have the uncertain asset of goodwill to remain permanently on the books. It is accordingly removed—written off as a loss to A, B, and C, because the write-off represents the eradication of an asset

CASE II–3–(*b*): *A capital bonus is allowed the new partner*

A and B admit C to a one-third interest in the business by a cash investment of $9,000.00. Total capital to be $33,000.00.

C's cash contribution is recorded as

Cash	9,000.00	
C, Capital		9,000.00
To record investment by new partner, C.		

But C should have a capital credit of one third of $33,000.00, or $11,000.00, and A and B together should have capital credits of two thirds of $33,000.00, or $22,000.00. The additional credit to C constitutes a loss to A and B, viz.:

A, Capital	1,000.00	
B, Capital	1,000.00	
C, Capital		2,000.00
To credit C with capital bonus. C is to have a one-third interest in the capital and profits of the partnership.		

In effect, therefore, A and B are paying C $2,000.00 to join them in business[2]. After the above entries have been posted, the capital accounts of

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owned by the new partnership. After the following entry has been posted,

A, Capital	2,000.00	
B, Capital	2,000.00	
C, Capital	2,000.00	
Goodwill		6,000.00
To write off the asset goodwill.		

the accounts of the partnership will be

GOODWILL		OTHER ASSETS	
6,000.00	6,000.00	39,000.00	

A, CAPITAL		B, CAPITAL		C, CAPITAL			TOTAL AGREED CAPITAL
2,000.00	9,000.00	2,000.00	15,000.00	2,000.00	15,000.00	=	$39,000.00
	3,000.00		3,000.00				

The balances of these accounts are identical with those of the first solution to this problem, Case II–3–a, page 341.

[2] It would have been incorrect to have recorded the $2,000.00 bonus thus:

Goodwill	2,000.00	
C, Capital		2,000.00

The capital accounts of the partners would then be:

A, CAPITAL		B, CAPITAL		C, CAPITAL	
	9,000.00		15,000.00		9,000.00
					2,000.00

giving a total capital of $35,000.00, which is contrary to the terms agreed to.

the partners will be

A, CAPITAL		B, CAPITAL		C, CAPITAL		TOTAL AGREED CAPITAL[3]
1,000.00	9,000.00	1,000.00	15,000.00		9,000.00	= $33,000.00
					2,000.00	

ADDENDUM It is important to observe that in each of the problems above complete information was had on each of the following points:

1. The total capital of the new partnership
2. The capitals of the old partners
3. The new partner's capital contribution and his capital credit

Occasionally, a problem may be encountered where information on these points is not complete. The following problem, as an illustration, therefore permits two solutions:

A and B admit C to a one-third interest in the business by a cash investment of $15,000.00.

Solution 1

$24,000.00 + $15,000.00 = $39,000.00 = Net Assets = Total Capital
C is to have a capital credit of one third of $39,000.00, or $13,000.00.

Entry (explanation omitted):

Cash	15,000.00	
A, Capital		1,000.00
B, Capital		1,000.00
C, Capital		13,000.00

Solution 2

If a one-third interest is worth $15,000.00, the total capital must be three times that figure or $45,000.00.

Entries (explanations omitted):

Goodwill	6,000.00	
A, Capital		3,000.00
B, Capital		3,000.00
Cash	15,000.00	
C, Capital		15,000.00

In the absence of further information, either solution must be accepted as correct.

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[3] This case is similar to Case II–2–(b). Instead of a total capital of $36,000.00, the capital here is $33,000.00, the sum of the net tangible assets. This, of course, indicates that goodwill is not to be placed on the books.

If goodwill is written off in the problem in Case II–2–(b), as we left it, the account balances will be identical with those presented in Case II–3–(b).

PROBLEMS OF DISSOLUTION

Introduction

A partnership is legally dissolved upon the occurrence of any change in its proprietary personnel. Financial statements should be prepared and the books closed, immediately (unless otherwise provided for by the articles of partnership), in order to determine each partner's financial interest in the business as of the *date of dissolution*.

The dissolution of a partnership does not necessarily mean a break in the continuity of business operations. This may be avoided if new articles of partnership are immediately formed and signed by the continuing or surviving partners. If desired, the books of the old partnership may be continued as the books of the new partnership provided a line of demarcation is established between the business of the old and the new partnerships.

A partnership is instantly dissolved upon the death of a partner. "The death of a partner operates as a dissolution of the partnership business, not only with respect to the deceased partner or his estate but with respect to all the partners. . . ."[4] Financial problems arise immediately. When, how, and in what amount shall settlement be made with the estate of the deceased partner? What about the ability of the business to continue its operations successfully? What about funds to meet the tax problems of the deceased partner's estate? Can some payment be made to the family of the deceased partner as compensation for his personal contribution to the firm's earning power? This is a question of some importance, especially to professional and personal service partnerships.

One plan for protecting both the business of the partnership and the families of partners is the following:

1. The partners enter into a partnership continuation agreement between themselves and a trustee. Under this agreement a cash payment to the estate or widow of a deceased partner is agreed upon covering the value of the deceased partner's interest in the business of the partnership. The value, or a formula for its determination, is agreed upon by all partners while living.

2. To meet the financial requirements of the agreement, each partner's life is insured by the other partners in amounts commensurate with their survivorship obligations in the partnership continuation agreement. The trustee holds the insurance policies and the agreement. On the death of a partner, the trustee collects the insurance money, confirms the value of the deceased partner's interest according to the agreement, obtains release of the deceased partner's interest and conveys it to the surviving partners, and turns the agreed purchase price, in cash, over to the estate of the deceased partner.

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[4] 47 C. J. 1111, Sec. 767.

A plan of this kind

allows the surviving partners to carry on the business of the partnership without arduous legal or financial complications;
provides the family of the deceased partner with a reasonable payment covering the contribution of the deceased partner to the success of the firm; and
represents an economical arrangement, taxwise, for both the surviving partners and the heirs of the deceased partner.

Attention will now be given to some of the accounting problems which arise in connection with the dissolution of a partnership, i.e., those which arise through (1) the sale of the business, (2) the retirement or death of a partner, or (3) the liquidation of the business.

Sale of the Business

If a partnership business is sold for a lump sum, any profit or loss on its sale should be distributed to the partners according to their current profit and loss ratios.

Example 1

On a given date, A and B, sharing profits and losses equally, have the following balance sheet:

A and B

BALANCE SHEET, MAY 17, 19__

Assets			*Liabilities and Capital*		
Current Assets:			Current Liabilities:		
Cash		$ 4,000.00	Accounts Payable		$10,000.00
Accounts Receivable	$25,800.00		Capital:		
Less Allowance for Bad Debts	800.00	25,000.00	A, Capital	$16,000.00	
Merchandise Inventory		8,000.00	B, Capital	14,000.00	30,000.00
		$37,000.00			
Fixed Assets:					
Delivery Equipment	$ 4,000.00				
Less Allowance for Depreciation	2,000.00				
	$ 2,000.00				
Office Equipment	$1,500.00				
Less Allowance for Depreciation	500.00	1,000.00			
		3,000.00			
		$40,000.00			$40,000.00

A and B sell their business, exclusive of cash, to John Doe for a cash price of $30,000.00. The entries to record the sale and to close the business of A and B are

John Doe	30,000.00	
Accounts Payable	10,000.00	
Accounts Receivable		25,800.00
Allowance for Bad Debts	800.00	
Merchandise Inventory		8,000.00
Delivery Equipment		4,000.00
Allowance for Depreciation—Delivery Equipment	2,000.00	
Office Equipment		1,500.00
Allowance for Depreciation—Office Equipment	500.00	
Profit on Sale of Business		4,000.00

To charge John Doe with net assets sold to him for a lump-sum price of $30,000.00.

Profit on Sale of Business	4,000.00	
A, Capital		2,000.00
B, Capital		2,000.00

To distribute profit on sale of business to partners, 50–50.

Cash	30,000.00	
John Doe		30,000.00

To record collection of sales price.

A, Capital	18,000.00	
B, Capital	16,000.00	
Cash		34,000.00

To liquidate partners' capital accounts.

If the assets of A and B had been appraised, individually, the new valuations might have been placed on the books through one or more adjusting entries. This is not general practice, however. Instead, the individual values of assets for sale purposes are incorporated in the explanatory data supporting the entry of sale. The difference, if any, between the price charged the purchaser and the book value of the net assets sold is the profit or the loss on the sale of the business. This profit or loss should be distributed to partners in their current profit-and-loss ratios.

Example 2

Suppose that the foregoing noncash assets of A and B had been appraised, individually, as follows:

	Book Value	*Sales Value*
Accounts Receivable	$25,000.00	$24,000.00
Merchandise Inventory	8,000.00	10,500.00
Delivery Equipment	2,000.00	1,500.00
Office Equipment	1,000.00	1,000.00
Goodwill	0.00	3,000.00
	$36,000.00	$40,000.00

The entries to record the sale and to close the business of A and B are as follows:

John Doe	30,000.00	
Accounts Payable	10,000.00	
Accounts Receivable		25,800.00
Allowance for Bad Debts	800.00	
Merchandise Inventory		8,000.00
Delivery Equipment		4,000.00
Allowance for Depreciation—Delivery Equipment	2,000.00	
Office Equipment		1,500.00
Allowance for Depreciation—Office Equipment	500.00	
Profit on Sale of Business		4,000.00

To charge John Doe with net assets sold to him for a price of $30,000.00, detailed as follows:

	Sales Price
Accounts Receivable	$24,000.00
Merchandise Inventory	10,500.00
Delivery Equipment	1,500.00
Office Equipment	1,000.00
Goodwill	3,000.00
	$40,000.00
Accounts Payable	10,000.00
	$30,000.00

Profit on Sale of Business	4,000.00	
A, Capital		2,000.00
B, Capital		2,000.00

To distribute profit on sale of business to partners, 50–50.

Cash	30,000.00	
John Doe		30,000.00

To record collection of sales price.

A, Capital	18,000.00	
B, Capital	16,000.00	
Cash		34,000.00

To liquidate partners' capital accounts.

Conversion of a Partnership into a Corporation

If a partnership is converted into a corporation, the conversion represents the sale of the net assets to the corporation. The partnership will record the sale, and close its books, in the manner illustrated above. Instead of cash, however, the partnership generally receives stock in the corporation. This asset will be debited to an account like "Stock in the AB Corporation," for example. The liquidation of partners' capital accounts will be recorded by debits to partners' capital accounts and a credit to the asset account, "Stock in the AB Corporation."

An illustration of the accounting entries underlying the conversion of a partnership into a corporation is presented in Chapter 18.

Retirement or Death of a Partner

The accounting procedures to be followed in these circumstances are similar to those which have just been described. In summary, the steps are these:

1. The books should be closed as of the date of dissolution (unless otherwise provided by the contract of partnership).

2. Entries should be placed upon the books to record any revaluation of assets necessary to determine the capital claim of the retiring partner, or the estate of the deceased partner. These revaluations, of course, must have been provided for by the articles of partnership. Gains or losses arising through revaluation should be credited or debited to the partners in their profit and loss ratios. When these revaluations are established, market or present values govern unless the articles of partnership provide otherwise.

With respect to the actual recording of asset revaluations, a conservative practice is to record *only* the increment or decrement belonging to the retiring partner. The only goodwill to be recorded, for instance, would be the amount actually credited to the capital account of the retiring partner. A conservative valuation is thus placed upon this asset whose value, at best, is problematical.

3. The adjusted credit balance in the capital account of the retired, or deceased, partner's capital account should be transferred to a special accounts payable, or notes payable, account as the case may be. *The change in the financial condition of the business should be noted.* The *liability* thus created will be discharged as provided for in the articles of partnership or, in lieu thereof, as otherwise agreed.

Liquidation of the Business

Extreme care is necessary in distributing the cash of a partnership which is being liquidated. As a general rule, liabilities should be paid first, then loans of partners, and, lastly, partners' capital accounts. Partners' unpaid salaries do not rank as preferred claims, there being no bona fide employer-employee relationship. Express partners' salaries, however, like other express and so-called "liabilities" to partners, take precedence over other kinds of partners' claims.

In no case, however, should any cash be paid to partners until all profits and losses have been distributed to capital accounts and the right of offset has been applied. Thus, a debit balance in a partner's capital account would be applied against the credit balance in his loan or salary account; only the difference between the two accounts would be disbursed.

Example

On a given date, A and B, sharing profits and losses equally, have the following balance sheet:

A and B

BALANCE SHEET, MAY 17, 19__

Assets				*Liabilities and Capital*		
Current Assets:				Current Liabilities:		
Cash			$ 4,000.00	Accounts Payable		$10,000.00
Accounts Receivable	$25,800.00			Capital:		
Less Allowance for Bad Debts	800.00		25,000.00	A, Capital	$16,000.00	
Merchandise Inventory			8,000.00	B, Capital	14,000.00	30,000.00
			$37,000.00			
Fixed Assets:						
Delivery Equipment	$ 4,000.00					
Less Allowance for Depreciation	2,000.00					
	$ 2,000.00					
Office Equipment	$1,500.00					
Less Allowance for Depreciation	500.00	1,000.00	3,000.00			
			$40,000.00			$40,000.00

A and B decide to dissolve their business. They realize the following amounts from the sale of their noncash assets:

Accounts Receivable	$22,000.00	Delivery Equipment	$1,000.00
Merchandise Inventory	5,000.00	Office Equipment	500.00

The realization of assets, the payment of liabilities, and the liquidation of proprietary accounts are recorded in the following entries:

Cash	28,500.00	
Dissolution Profit and Loss	7,500.00	
Accounts Receivable		25,800.00
Allowance for Bad Debts	800.00	
Merchandise Inventory		8,000.00
Delivery Equipment		4,000.00
Allowance for Depreciation—Delivery Equipment	2,000.00	
Office Equipment		1,500.00
Allowance for Depreciation—Office Equipment	500.00	
To record cash received for assets sold and the loss of $7,500.00 incurred on their sale.		
A, Capital	3,750.00	
B, Capital	3,750.00	
Dissolution Profit and Loss		7,500.00
To distribute loss on sale of assets to partners, 50–50.		
Accounts Payable	10,000.00	
Cash		10,000.00
To record payment of liabilities.		
A, Capital	12,250.00	
B, Capital	10,250.00	
Cash		22,500.00
To liquidate partners' capital accounts.		

A number of specialized accounting problems arise when partnership liquidation is slow and when it is desired to disburse cash as it is collected periodically. Because of the care necessary in the installment liquidation of a partnership and because of the responsibilities involved, the disburser of cash should be thoroughly familiar with accepted accounting procedures of liquidation. These procedures are discussed in advanced accounting textbooks, including the author's *Advanced Accounting*.

PROBLEMS

Problem 17–1. X and Y are partners, sharing profits and losses in the ratios of 60% and 40%, respectively. X has a capital credit of $25,200.00, and Y, $10,800.00.

In each of the ten parts of this problem: (1) prepare all required entries, and (2) set up the final capital credit of each partner. Each problem should be considered independently, i.e., beginning with X's capital of $25,200.00, and Y's capital of $10,800.00.

1. Z is admitted to partnership and a 20% share in the profits in return for his services but no capital investment. (*Note:* In the future, how should X and Y share profits and losses?)
2. Z buys 1/2 of X's interest in the business for $15,000.00 cash.
3. X and Y admit Z to a 1/3 interest in the business by investing, and receiving credit for, $20,000.00 cash.
4. X and Y admit Z to a 1/3 interest in the business by a cash investment of $15,000.00. Total capital to be $51,000.00.
5. X and Y admit Z to a 1/3 interest by a cash investment of $15,000.00. Total capital to be $54,000.00.
6. X and Y admit Z to a 1/3 interest in the business by a cash investment of $20,000.00. Total capital to be $57,000.00.
7. X and Y admit Z to a 1/3 interest in the business by a cash investment of $24,000.00. Total capital to be $72,000.00.
8. X and Y admit Z to a 1/3 interest in the business by a cash investment of $18,000.00.
9. X and Y admit Z to a 1/3 interest in the business by a cash investment of $18,000.00. Total capital to be $45,000.00. X, Y, and Z agree that the capital interest of each partner in the new partnership shall be equal to the new profit and loss interest of each partner. (After allowing for Z, remaining profits are to be shared by X and Y in the ratio of 60–40.)
10. X and Y admit Z to a 1/3 interest in the business by a cash investment of $20,100.00. Two solutions. (*Note:* In the future, how should X and Y share profits and losses?)

Problem 17–2. A and B, whose capitals are $20,000.00 and $40,000.00, respectively, admit C to a 25% interest in the business upon a cash investment of $12,000.00. The following entry is made:

Cash	12,000.00	
Goodwill	6,000.00	
C, Capital		18,000.00

To credit C's capital account for an amount equal to 25% × ($20,000.00 + $40,000.00 + $12,000.00) = $18,000.00.

After this entry was posted, the condensed balance sheet of the new firm was

Assets		*Equities*		
Cash	$22,000.00	Sundry Liabilities		$20,000.00
Sundry Assets	70,000.00			
Goodwill	6,000.00	Net Worth:		
		A, Capital	$20,000.00	
		B, Capital	40,000.00	
		C, Capital	18,000.00	78,000.00
	$98,000.00			$98,000.00

Required

Does this balance sheet fairly present the intent of the partners? If not, prepare the balance sheet after making any adjustments necessary.

Problem 17–3. On December 31, 19__, the condensed trial balance of X and Y was as follows:

Cash	$ 30,000.00	
Sundry Assets	170,000.00	
Sundry Liabilities		$ 80,000.00
X, Capital		65,000.00
Y, Capital		55,000.00
	$200,000.00	$200,000.00

X and Y share profits and losses in the ratios of 60% and 40%, respectively.

As of the following day, January 1, 19__, X and Y admit Z to a 1/3 interest in the net assets, and profits, of the partnership with the following understandings:

1. Z is to pay $60,000.00 cash for his interest.
2. All partners are to have equal capitals of $40,000.00 each, or a total capital for the new partnership of $120,000.00.
3. No goodwill account is to be carried on the books of X, Y, and Z.
4. Profits and losses of the new partnership are to be shared equally.

Required

1. Entry to record the admittance of Z to the partnership.
2. Entry to record the payment of cash to X and Y.
3. Balance sheet at the close of business, January 1, 19__.

Problem 17–4. The condensed balance sheet of A and B on December 31, 1957, was as follows:

Assets	$140,000.00	A, Loan	$ 20,000.00
		A, Capital	76,000.00
		B, Capital	44,000.00
	$140,000.00		$140,000.00

On January 1, 1958, A and B admitted C to a 1/3 interest in the business by an investment of $76,000.00 cash, which was credited to his capital account.

The three partners made the following agreements:

1. Interest at 6% is to be allowed on average capital employed during the year.
2. Salaries, as a partial division of profits, are to be allowed: A, $5,360.00, B, $7,200.00, and C, $10,120.00.
3. Remaining profits are to be shared equally.

For the year ended December 31, 1958, operating profits—before partners' salaries and interest on capital—were $48,000.00. The condensed general ledger on this date, in T-account form, was

ASSETS

300,000.00	

ACCOUNTS PAYABLE

	12,000.00

A, LOAN PAYABLE

	20,000.00

PROFIT AND LOSS

	48,000.00	May 1	72,000.00

A, CAPITAL

		Jan. 1	Balance	92,000.00

B, CAPITAL

Sept. 1	20,000.00	Jan. 1	Balance	60,000.00
Nov. 1	20,000.00	July 1		60,000.00

C, CAPITAL

		Jan. 1	Balance	76,000.00
		July 1		44,000.00

Required

1. Entries required to close the Profit and Loss account.
2. Balance sheet, December 31, 1958.
3. Statement of capital for the partners for the year ended December 31, 1958.

Problem 17–5. The partnership agreement of X, Y, and Z contained these specifications:

1. Capital contributions were to be X, $40,000.00; Y, $60,000.00; and Z, $100,000.00. It was also agreed that in the event a partner's average capital was less than his agreed contribution, he was to be charged 8% interest on his deficiency; if more, he was to be credited with 6% interest on his excess investment.

2. Annual salaries were to be X, $4,000.00; Y, $6,000.00; and Z, $10,000.00. Salaries were to be payable in quarterly installments but no interest was to be allowed on undrawn salaries.
3. The profit and loss ratios were to be X, 20%; Y, 30%; Z, 50%.

In T-account form, the condensed general ledger of the partnership on December 31, 19__, was

SUNDRY ASSETS	
196,072.00	

X, CAPITAL	
	44,000.00

X, DRAWING	
4,000.00	4,000.00

Y, CAPITAL	
	60,000.00

Y, DRAWING	
4,000.00	6,000.00

Z, CAPITAL	
	86,000.00

Z, DRAWING	
4,800.00	10,000.00

PROFIT AND LOSS	
	18,872.00

PARTNERS' SALARIES	
4,000.00	
6,000.00	
10,000.00	

Required

Prepare the balance sheet of the partnership, December 31, 19__. The actual average capital invested by the partners was as follows:

	FOR THE THREE MONTHS ENDING WITH			
	March 31	*June 30*	*September 30*	*December 31*
X	$40,000.00	$32,000.00	$52,000.00	$44,000.00
Y	40,000.00	50,000.00	56,000.00	60,000.00
Z	40,000.00	60,000.00	68,000.00	86,000.00

Problem 17–6. The partnership of Morse & Adams was engaged in the retail machinery business. On December 31 of the past calendar year, the condensed balance sheet of the partnership was as follows:

Assets		*Equities*	
Cash	$ 5,000.00	Notes Payable	$ 5,000.00
Accounts Receivable	15,000.00	Accounts Payable	10,000.00
Inventory	50,000.00	Franklin B. Morse, Capital	50,000.00
Fixed Assets (net)	35,000.00	Wayne L. Adams, Capital	40,000.00
	$105,000.00		$105,000.00

On January 1 of the current calendar year Morse & Adams accepted Anson T. Orrick as a new partner. Mr. Orrick was the owner of an exclusive distributorship for a machine which would constitute an excellent addition to the line already merchandised by Morse & Adams. Orrick, accordingly, invested $17,500.00 cash plus the exclusive distributorship of the above machine for a 1/5 interest in the new partnership. The combined capital of Morse and Adams, $90,000.00, was to represent a 4/5 interest in the new partnership. It was mutually agreed that the distributorship agreement

was worth the additional amount needed to pay fully for Orrick's 1/5 interest.

The profit and loss ratio of the new partnership was established as follows: Morse, 45%; Adams, 35%; Orrick, 20%.

During the first 6 months of operation, the new partnership earned cash profits of $10,000.00 (assume that no change occurred in the noncash assets and the liabilities of the business). Because of a clash of personalities, Morse and Adams offered Orrick $20,500.00 cash in full settlement of his partnership interest. Orrick accepted this offer and received his cash accordingly.

In the new partnership of Morse & Adams, the two partners agreed to share profits and losses in the same ratios in which they shared profits and losses in the partnership of Morse, Adams, & Orrick.

Required

Balance sheet of Morse & Adams, July 1, 19__. In what respects is this balance sheet strong or weak?

Problem 17–7. On December 31, 19__, the condensed balance sheet of X and Y was

Cash	$ 20,000.00	X, Capital	$120,000.00
Sundry Assets	200,000.00	Y, Capital	100,000.00
	$220,000.00		$220,000.00

On the next day Z was admitted to a 1/5 interest in the capital and the profits of the business by investing, and receiving credit for, $60,000.00 cash.

For the ensuing 12 months, the profits of the new partnership amounted to $20,000.00, realized in cash.

Required

1. Balance sheet, December 31, 19__, giving effect to all of the above information.
2. If the business was then sold for $330,000.00 cash, how should the cash be divided among the partners?

Problem 17–8. X and Y have the following balance sheet:

Assets		*Equities*	
Cash	$ 5,000.00	Accounts Payable	$ 10,000.00
Accounts Receivable	27,000.00	X, Capital	50,000.00
Merchandise Inventory	33,000.00	Y, Capital	40,000.00
Delivery Equipment	4,000.00		
Office Equipment	3,000.00		
Building	25,000.00		
Land	3,000.00		
	$100,000.00		$100,000.00

X and Y sell their business, except cash, to Z and Z for $100,000.00. For sales purposes, the assets transferred were appraised as follows:

Accounts receivable	$25,000.00	Building	$30,000.00
Merchandise inventory	35,000.00	Land	5,000.00
Delivery equipment	3,000.00	Goodwill	10,000.00
Office equipment	2,000.00		

Z and Z take over the business by giving a check for $100,000.00 to X and Y.

Required

1. What entry, or entries, should be made to close the books of X and Y?
2. What entry should be made on the books of Z and Z to record the purchase of the business of X and Y?

Problem 17–9. A and B established a partnership in which A invested a building valued at $50,000.00, and land valued at $30,000.00. B invested cash of $25,000.00 deposited in the partnership bank account. B was to act as general manager of the business. Profits and losses were to be shared 50-50.

During the night of the first twenty-four hours of the partnership, the building was completely destroyed by fire. Since the building was not insured, the loss was a damaging one. The partners decided that it was futile for them to continue in business. Following this decision, A took back his land, and the $25,000.00 of cash was disbursed to the partner or partners entitled to receive it.

Required

Make the entry showing the disbursement of the cash, $25,000.00.

Problem 17–10. On October 1, 19__, John E. Alden and Ira J. Bryan opened a small business for the sale of a general line of building supplies. Mr. Alden invested $25,000.00 of merchandise and $10,000.00 of cash. The cash, in the form of currency, was placed in the office safe of the partnership, a safe donated by Mr. Alden to the partnership. Mr. Bryan deposited $5,000.00 cash in the First National Bank to the credit of Alden & Bryan.

The partners did not establish any profit and loss ratios, although they expected that this would be taken care of in the near future.

Just as they were closing their office at the end of the first day of partnership, the partners were the victims of a holdup in which the entire $10,000.00 of currency was stolen.

Required

1. Prepare the balance sheet of Alden & Bryan at the end of the day.
2. If the business were dissolved on October 2, what entry should be made to record the disbursement of the cash in the bank?

Problem 17–11. The condensed balance sheet of A, B, and C on December 31, 19__ was as follows:

Sundry Assets . .	$80,000.00	Accounts Payable		$25,000.00
		A, Loan Payable		12,500.00
			P & L Ratio	
		A, Capital . . .	40% . . .	7,500.00
		B, Capital . . .	20% . . .	15,000.00
		C, Capital . . .	40% . . .	20,000.00
	$80,000.00			$80,000.00

The partners decided to dissolve their partnership. The assets were converted into $60,000.00 cash.

Required

What entries should be made to close the books of the partnership?

Problem 17–12. The balance sheet of Ellison & Lee on December 31, 19__, was as follows:

Assets			*Equities*	
Cash		$ 5,000.00	Accounts Payable . . .	$ 38,000.00
Accounts Receivable . . .	$40,000.00			
Less Allowance for Bad Debts	2,000.00	38,000.00	A. N. Lee, Loan Payable .	30,000.00
Merchandise Inventory		40,000.00	G. R. Ellison, Capital . .	70,000.00
Fixed Assets		75,000.00	A. N. Lee, Capital . . .	20,000.00
		$158,000.00		$158,000.00

Profits and losses were shared: Ellison, 60%; Lee 40%.

The partnership was dissolved as of December 31, 19__. The accounts receivable were sold for $30,000.00 cash, the merchandise for $33,000.00 cash, and the fixed assets for $50,000.00 cash. All cash was distributed to those entitled to receive it.

Required

What entries should be made to record the above transactions and the termination of the partnership?

Problem 17–13. The condensed balance sheet of A & B, a partnership, on December 31, 1958, was

Cash	$100,000.00	A, Capital	$ 56,000.00
		B, Capital	44,000.00
	$100,000.00		$100,000.00

During 1958 profits were divided A, 50%, and B, 50%. In 1957 profits were divided A, 70%, and B, 30%.

In your examination of the accounts you find that the inventory of December 31, 1957, was recorded at a cost value of $90,000.00; the correct value, however, should have been $60,000.00.

A and B have decided to dissolve their business.

Required

How should the cash of $100,000.00 be disbursed?

Problem 17–14. On December 31, 19__, after the books had been closed, the open accounts on the ledger of W, X, Y, and Z were

Cash	$ 2,600.00	
Noncash Assets	66,000.00	
Accounts payable		$18,000.00
W, Loan Payable		10,000.00
W, Capital		5,000.00
X, Capital		15,000.00
Y, Capital		20,000.00
Z, Capital		5,000.00
Z, Drawing	4,400.00	
	$73,000.00	$73,000.00

The profit and loss sharing ratios of the partners were W, 30%; X, 20%; Y, 40%; and Z, 10%.

In the dissolution of the business, the noncash assets were converted into $42,000.00 cash. All cash was distributed to those entitled to receive it.

Required

What entries should be made to distribute the cash? (There is no accrued interest on W's loan. Z has no property other than his interest in the partnership.)

Problem 17–15. The condensed balance sheet of X, Y, and Z on December 31, 19__, was

Sundry Assets	$55,000.00	Accounts Payable	$ 8,250.00
		X, Loan Payable	5,500.00
		X, Capital	20,630.00
		Y, Capital	13,748.00
		Z, Capital	6,872,00
	$55,000.00		$55,000.00

Profits and losses were shared equally by the partners.

In the dissolution of the business, the assets were converted into $40,000.00 cash.

Required

1. What entries should be made to wind up the affairs of the partnership? Z has no assets other than his investment in the partnership.
2. Suppose that the assets had realized cash of (a) $21,880.00, (b) $17,860.00, (c) $6,700.00. In each of these cases, what entries should be made to wind up the affairs of the partnership?

Problem 17–16. The balance sheet of Raye & Wilson on January 1, 19__, was

Cash		$ 10,000.00	Accounts Payable		$ 25,000.00
Accounts Receivable	$21,000.00		Notes Payable		15,000.00
Less Allce. for Bad Debts	1,000.00	20,000.00		*P & L Ratio*	
Merchandise Inventory		50,000.00			
Building		35,000.00			
Warehouse		18,000.00	J. C. Raye, Capital	56¼ %	$ 50,000.00
Land		7,000.00	John F. Wilson, Capital	33¾ %	40,000.00
			Roy S. Wilson, Capital	10 %	10,000.00
		$140,000.00			$140,000.00

The building (cost $35,000.00) and land (cost $5,000.00) were sold for cash, $60,000.00. Roy S. Wilson then retired from the partnership, receiving cash for his interest.

After the retirement of Roy S. Wilson, the remaining partners decided to liquidate their business. The accounts receivable were sold for $15,000.00, and the merchandise for $40,000.00, all cash. The warehouse and land (cost $2,000.00) were sold for $30,000.00 to the holder of the note payable, who paid $15,000.00 cash and canceled the note payable of $15,000.00. All cash on hand was then paid to those entitled to receive it.

Required

1. What is the entry to record the cash settlement with Roy S. Wilson?

2. Assuming no change in the ratios in which these two partners share profits and losses, what entries should be made to record the cash settlements with J. C. Raye and John F. Wilson?

Problem 17–17.

Clark, Jones, & Husen

BALANCE SHEET, DECEMBER 31, 1957

Cash		$13,000.00	Accounts Payable		$18,000.00
Accounts Receivable		15,000.00		*P & L Ratio*	
Merchandise Inventory		17,000.00			
Fixed Assets		10,000.00	L. A. Clark, Capital	20 %	10,000.00
			S. M. Jones, Capital	30 %	12,000.00
			A. R. Husen, Capital	50 %	15,000.00
		$55,000.00			$55,000.00

Desiring to go into business for himself, Mr. Clark retires from partnership and offers to settle his capital claim for $9,200.00 cash if payment is made immediately. This offer is accepted and a check is issued to Mr. Clark for $9,200.00. Jones and Husen agree that they will continue to share the profits of the business in the same ratio as heretofore.

At the end of 1958, net income for the year is found to be $5,600.00. On December 31, 1958, the assets were cash, $4,400.00; accounts receivable, $16,000.00; merchandise, $18,600.00; and fixed assets (after allowance for depreciation, $1,000.00), $9,000.00.

Neither of the partners added assets to or withdrew assets from the business during the year.

Because of their low cash position, the partners decided that a reorganization was necessary. They accordingly admitted K. M. Wilford to partnership by accepting from him the following assets and liability:

cash, $10,000.00; accounts receivable (after an allowance for bad debts of $3,000.00), $12,000.00; merchandise, $7,000.00; and accounts payable, $9,000.00.

It was further agreed that Jones and Husen were to be granted a goodwill of $5,000.00, and that Jones and Husen were each to contribute sufficient cash to bring their capital account balances up to $20,000.00 and $25,000.00 respectively.

The new profit and loss ratios were Jones, 30%; Husen, 40%; and Wilford, 30%.

It was further agreed that goodwill was to be written off before the new partnership commenced actual operations.

Required

1. What entries should be made to record the above transactions? The books of the first partnership were continued in use by the new partnerships.
2. Balance sheet of the new partnership of Jones, Husen, and Wilford.

Chapter 18 CORPORATIONS: INTRODUCTORY

Definitions

A corporation has been defined by Chief Justice Marshall as follows:

A corporation is an artificial being, invisible, intangible, and existing only in contemplation of law. Being the mere creature of law, it possesses only those properties which the charter of its creation confers upon it, either expressly or as incidental to its very existence. These are such as are supposed best calculated to effect the object for which it was created. Among the most important are immortality and, if the expression may be allowed, individuality; properties by which a perpetual succession of many persons are considered as the same and may act as a single individual. They enable a corporation to manage its own affairs, and to hold property without the perplexing intricacies, the hazardous and endless necessity of perpetual conveyances for the purpose of transmitting it from hand to hand. It is chiefly for the purpose of clothing bodies of men, in succession, with these qualities and capacities that corporations were invented and are in use. By these means a perpetual succession of individuals are capable of acting for the promotion of the particular object, like one immortal being.[1]

In a later case the United States Supreme Court stated: "Private corporations are but associations of individuals united for some common purpose, and permitted by the law to use a common name, and to change its members without a dissolution of the corporation."[2] And the *Standard Dictionary* defines a corporation as "an artificial person created by law, consisting of one or more natural persons united in one body under such grants as secure a succession of members without changing the identity of the body, and empowered to act in a certain capacity or to transact business of some designated form or nature like a natural person."

Why Corporations Are Formed

The corporate form of business organization is widely used. The main advantages claimed for the corporate form of business enterprise are these:

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[1] *Dartmouth College* v. *Woodward*, 4 Wheaton (U. S.) 518 (1819).

[2] *Baltimore & Potomac Railroad Co.* v. *Fifth Baptist Church*, 108 U. S., 317, 330 (1883).

1. A corporation has continuous existence. A corporation is a legal entity which, in most states, may exist in perpetuity. A corporation is not disrupted by the death or incapacity of one of its owners.

2. The owners of a corporation have limited liability. As a general rule creditors of a corporation have financial rights against *only* the assets of the corporation and no rights against the private property of the owners of the corporation.

3. The ownership of a corporation may be closely held or widely diffused.

4. Documents representing corporate ownership (i.e., certificates of capital stock) may be transferred readily without affecting the life or the business of the corporation.

5. Financing is easier for a corporation than for a partnership or a proprietorship. The ability of a corporation to gather capital from many individuals is enhanced by the limited liability attaching to corporate investors. Further, the corporation can resort to many sources for its funds. The kinds of securities which may be issued in exchange for these funds vary widely. Various kinds of capital stock with distinctive characteristics of ownership may be used as well as various kinds of notes and bonds payable.

6. The corporate form of business is especially well adapted to businesses which require large investments of capital.

7. The formation of new businesses is encouraged. (See 2, 5, and 6 above.)

8. To some extent the corporation has an advantage in achieving mobility, flexibility, and efficiency in its management and, as a corollary, in administering its internal affairs as well. The corporation is generally able to compete effectively for, and to hire, the best in managerial talent. The ability of a corporation to hire managerial skills makes it unnecessary, as a general rule, for stockholders to participate in the managements of the corporations which they own.

The main disadvantages of the corporate form of business enterprise are generally considered to be these:

1. Taxes on corporations are burdensome. Corporations are subject to special fees, like capital stock taxes, to franchise taxes, and, more importantly, to high rates of taxation on their incomes. Not only are corporations highly taxed on their incomes but the dividend recipients of this income are subject to personal taxation as well.

2. Corporations are subject to considerable public regulation and to inquiry into their affairs.

3. By the mere fact of size alone, corporations are often subject to suspicion, accusation, and investigation.

4. Complex corporate financial structures and diffused ownership interests sometimes provide an opportunistic setting for a small group of persons—owning less than a majority of the corporation's capital stock—to control and operate a corporation more for their own benefit than for

that of stockholders generally. The opportunity for the procurement of this control is encouraged by the apathy of stockholders and by easily procured proxies.

5. The relative ease of obtaining corporate capital sometimes leads to undesirable speculation in the capital stock of the corporation.

For the purpose of this book, it is not advisable to attempt a full description and discussion of the corporate form of business organization. For a detailed presentation of this subject, a standard text on corporate finance and business organization should be consulted.

Nature of the Corporation

A corporation is a legal entity. In the eyes of the law, the corporation is a *legal individual*, distinct and separate from its owners, the stockholders. All transactions with and by the corporation must be in the name of the corporation. No stockholder, as such, may act for the corporation or for other stockholders. A stockholder is *not* an agent of either the corporation or its stockholders.

Title to the assets of a corporate business rests in the name of the corporation and not in the names of those legal persons who own the corporation. Legal proceedings by or against a corporation must be in the corporate name.

No liability, either to the corporation or to its creditors, attaches to stockholders who have paid par for their stock or, in the case of no-par stock, who have paid their capital stock subscriptions in full. Creditors may attach corporate assets only. The paid-in capital of a corporation is therefore expected to be maintained intact—in both a business and legal sense—for the protection of creditors. This contrasts with a partnership, where paid-in capital is *not* required to be maintained intact; the reason is the unlimited personal liability which attaches to partners for the payment of the debts of a partnership business.

Management of the corporation is centralized and responsibilities are fixed. A partnership, on the other hand, often has its lines of authority divided—to the detriment of unified policy and responsible leadership.

Dividends are payable by a corporation to its stockholders if the dividends have been earned and if they have been formally declared by the company's board of directors. Proprietary drawing accounts do not exist.

A corporation possesses continuous existence. The life of a corporation is not affected by changes in the personnel of its ownership. A corporation may be dissolved by

1. voluntary surrender of its charter,
2. expiration of the period over which the corporation was authorized to exist,

3. order of court, or
4. an action of the state of incorporation based on the company's violation of state law or its failure to pay taxes.

Formation of the Corporation

Briefly, the steps to form a corporation are as follows:

1. A charter application, signed by three or more incorporators and notarized, is filed with the secretary of the state in which the business is to be incorporated. This application covers such information as the following:
   a) Name and address of the corporation.
   b) Kind of business to be conducted, including a statement as to the company's express powers.
   c) Capital stock to be issued, including a statement as to the amount and number of shares for each class of stock[3] and the rights attaching to each of these classes.
   d) Incorporators, their names and addresses.
   e) Period for which the corporation is to exist.
   f) Subscribers to the corporation's capital stock, shares of capital stock subscribed for by each, and name and address of each subscriber.
   g) Directors, their number, and the names and addresses of directors serving until the company's first meeting of stockholders.
   h) Facts to the effect that incorporators are of age, that two thirds of them are United States citizens, and so on.
2. Upon approval by the secretary of state, and the payment of filing fees, the application becomes the company's charter—the authority of the business to operate as a corporation.
3. The stockholders meet to elect a board of directors and to adopt bylaws to govern the internal administrative affairs of the corporation.
4. The directors meet and appoint the officers of the corporation.

Capital Stock

The capital stock of a corporation, described in its charter as that which the corporation is legally authorized to sell, is called the "authorized capital stock" of the corporation. Capital stock, representing the legal ownership of a corporation, is divided into "shares" of ownership. Each share (of any given class of capital stock) is on a parity with every other share. A constant and given face or "par" value, ranging from $0.01 to $1,000.00 or more, may be imprinted on each share. On the other hand, shares may not have any face or par value; such shares are "without par value."

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[3] The various classes of capital stock are discussed on pages 365–368.

Example

The General Sales Corporation has an authorized capital stock of $100,000.00, consisting of 1,000 shares of $100.00 par—the capital stock being divided into 1,000 equal parts of an assigned value of $100.00 each—each of these parts being called a "share" of $100.00 par and representing a 1/1,000 ownership interest in the corporation.

Many corporations today favor a low par value for their shares of capital stock. This position is taken in order to achieve a tax saving for stockholders. Under the present Internal Revenue Code a shareholder selling or transferring shares of no par value, for example, is required to pay a federal transfer tax of $0.05 per share, whereas on par value shares the tax is $0.05 for each $100.00 of par or face value or fraction thereof—unless the selling price is $20.00 or more, in which case the tax changes from $0.05 to $0.06.

Shares of capital stock have their physical evidence in *certificates* of capital stock issued by the corporation to the purchaser of its stock. For example, a purchaser of ten shares of the capital stock of the General Sales Corporation, referred to above, would receive a stock certificate for ten shares of capital stock as evidence of his ownership of 10/1,000 of the corporation—assuming all authorized capital stock of the corporation to be sold and outstanding.

Stock certificates are numbered serially. When a corporation employs an independent registrar and independent transfer agent (required of corporations whose stock is listed on the New York Stock Exchange), the stock certificate will have two pen-and-ink signatures in addition to the printed signatures of the president and secretary of the corporation. The pen-and-ink signatures are those of

1. the *registrar*, whose signature certifies that the certificate of capital stock is genuine; and
2. the *transfer agent*, whose signature certifies that the certificate is made out in the name shown as the owner of the stock on the records of the corporation.

Registrars and transfer agents are usually banks and trust companies which have special departments for these corporate functions.

In companies in which the functions of registrar and transfer agent are assumed by officers of the corporation, the only two signatures on the certificates of capital stock will be the pen-and-ink signatures of the president and secretary of the corporation. Still other corporations may assume only the duties of a transfer agent or the duties of a registrar. The duties not assumed will be assigned to a bank or trust company.

Certificates of capital stock are transferred from one owner to another by endorsement. In order to record the change of ownership on the books of the corporation affected, the endorsed certificate (with transfer stamps

affixed) must be surrendered by the seller, the transfer of ownership recorded by the corporation, and a new certificate of capital stock issued in the name of the new owner.

Preferred Stock and Common Stock

Up to this point all capital stock has been referred to as being of one kind, i.e., common stock. While the capital stock of a corporation may consist entirely of common stock, it is often divided into several classes of capital stock, the most common classes being *preferred stock* and *common stock*. Sometimes these two classes of capital stock are subdivided into First Preferred Stock, Second Preferred Stock, Class A Common Stock, Class B Common Stock, and so on. Each class of capital stock is represented on the general ledger of a corporation by a controlling account whose title corresponds with the name of the class of capital stock it represents.

In the absence of law or charter provision to the contrary, preferred stock—because it is capital stock—has one vote per share. However, the tendency today is markedly in the direction of modifying or eliminating this voting privilege, and of vesting voting power solely in the common stock of a corporation.

Preferred stock possesses certain preferential rights over common stock. Usually it has preference as to dividends and as to assets in the event of the dissolution of the corporation. Occasionally preferred stock possesses conversion rights. The preferences and rights which attach to a particular issue of preferred stock should be stated in the charter or in the bylaws, as well as in the certificates of preferred stock.

The $5 preferred stock of the Gillette Safety Razor Company, Inc., for example, has the following characteristics:

1. It is preferred as to dividends in the amount of $5.00 per annum. A full year's dividends must be set aside for the preferred stock before any dividend may be paid on the common stock.
2. It is cumulative.
3. It is callable at 105.
4. It is convertible into common stock, share for share. The conversion privilege is protected against dilution.
5. Entitled to one vote per share.
6. Entitled to share ratably with the common stock in the event of corporate dissolution.

Preferred stock may be cumulative or noncumulative as to dividends. A 6% cumulative preferred stock of $100.00 par value is entitled to an annual dividend of $6.00 per share before any dividend may be paid to the holders of common stock. Moreover, if the preferred dividends for a particular year are not paid in that year, the preferred dividends "accumulate."

These accumulated dividends must be paid in full before any dividend payments may be made upon the common stock. Unless expressly contracted otherwise, preferred stock is, by the weight of judicial authority, both cumulative and voting.[4]

Up to 1930 there was a growing tendency on the part of the courts of the various states to regard noncumulative preferred stock as having a preferential right to dividends to the extent that dividends had been earned. Thus if, in a given case and year, there were no earnings, dividend rights for that year would be forfeited forever. On the other hand, if $4.00 of a $6.00 preferred dividend had been earned, the noncumulative preferred stock was considered to have a preferred right to a dividend of $4.00 and to forfeit forever all right to the balance of $2.00 which was not earned. The state courts also held that when earnings were sufficient to pay part, or all, of the full dividend rate on the noncumulative preferred stock, but these earnings were not disbursed, the unpaid "earned" dividends accumulated in favor of the preferred stock and were required to be paid in full before dividends could be paid on the common stock.

This developing dividend theory of the state courts was significantly rejected in an outstanding decision[5] of the United States Supreme Court in 1930 in which it was held that holders of noncumulative preferred stock were not entitled to preferential dividends for those years in which net profits were earned but applied in good faith to capital improvements. The court indicated its agreement with "the common understanding of lawyers and business men" that "noncumulative stock is only entitled to a dividend if declared out of annual profits" and that "if those profits are justifiably applied by the directors to capital improvements, and no dividend is declared within the year, the claim for that year is gone and cannot be asserted at a later date."

Massachusetts followed this case in 1931.[6] In New Jersey, however, dividends on noncumulative preferred stock have been declared cumulative to the extent that profits have been earned and that profits remain after having been applied against an earned deficit arising out of the operations of prior years[7] In spite of the New Jersey decision it is today commonly understood that no part of the dividend on a noncumulative preferred stock is cumulative.[8]

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[4] *Hazel Atlas Glass Co.* v. *Van Dyke & Reeves*, 8 Fed. (2d) 716 (1925). 7 R.C.L. 287 and 7 R.C.L. 345.

[5] *Wabash Ry.* v. *Barclay*, 280 U. S. 197 (1929).

[6] *Joslin* v. *Boston & Maine RR.*, 274 Mass. 551.

[7] *Cintas* v. *American Car & Foundry Company*, 131 N. J. Eq. 419 (1942). *Lich* v. *U. S. Rubber Co.*, 123 F. 2d 145 (1942). *National Newark & Essex Banking Co.* v. *Durant Motor Co.*, 1 A. 2d 316, 124 N. J. Eq. 213.

[8] *American Jurisprudence* (*Corporations*) (Rochester, N. Y.: Lawyers-Cooperative Publishing Company, 1938), §§693–694, pp. 701–703.

Preferred stock may also be participating. This means, usually, that the preferred stock of a corporation is entitled to the same dividend rate as is paid on the common stock if this rate is higher than the designated rate on the preferred stock, i.e., if 8% is paid on common stock of $100.00 par value, 8% must also be paid on the 6% preferred stock of $100.00 par value. Preferred stock, according to the weight of judicial authority, is not participating stock unless contractually so agreed.[9] This is the rule of the federal courts[10] and the courts of Maine,[11] Maryland,[12] and New York.[13] Georgia,[14] Indiana,[15] and Pennsylvania[16] hold the preferred stock of a corporation to be fully participating. The supreme courts of other states have not passed upon the point.

Example

A corporation has capital stock outstanding of

$100,000.00	5% Preferred Stock, $100.00 par, cumulative and participating
200,000.00	Common Stock, $100.00 par

and profits available for distribution as cash dividends of $21,000.00. This amount would be apportioned between the preferred and common stocks as follows:

	DIVIDEND ON		
	Preferred	*Common*	*Total*
Preference dividend on preferred stock:			
5% × $100,000.00	$5,000.00		$ 5,000.00
Dividend on common stock:			
5% × $200,000.00		$10,000.00	10,000.00
Additional dividend of 2% on each class of capital stock:			
2% × $100,000.00	2,000.00		2,000.00
2% × $200,000.00		4,000.00	4,000.00
Total dividend	$7,000.00	$14,000.00	$21,000.00

As before stated, this is the type of participation which is usually considered as being applicable to participating preferred stock. However, there are other types of participating preferred stock, the degree of participation varying widely. Because of this variance, a participating preferred stock should be defined as one which receives a share in profits in excess of its

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[9] *Ibid.*, §697, pp. 708–710.
[10] *Niles* v. *Ludlow Valve Mfg. Co.*, 202 Fed. 141 (1913).
[11] *Stone* v. *United States Envelope Company*, 119 Maine 394.
[12] *James F. Powers Foundry Co.* v. *Miller et al.*, 171 A. 842 (1934).
[13] Stock Corporation Law, Section 5, (1923).
People ex rel. Siegel v. *Lyons*, 201 App. Div. N. Y. 530 (1922).
Lockwood v. *General Abrasive Co.* 205 N. Y. Supp. 511 (1924), affirmed 210 App. Div. 141 (1924).
[14] *Coggeshall* v. *Georgia Land and Investment Company*, 14 Ga. App. 637 (1914).
[15] *Star Publishing Company* v. *Ball*, 192 Ind. 158.
[16] *Fidelity Trust Co.* v. *Lehigh Valley Rr. Co.*, 215 Pa. 610.

regular rate of dividend after the common stock has received a dividend equal to the rate on the preferred stock, or at some other stipulated rate. For a full description and discussion of participating preferred stocks, reference should be made to standard texts on corporation finance.

To conclude this section it may be stated that, unless otherwise specified by law or charter provisions, preferred stock is

preferred as to dividends and as to assets,
cumulative and voting (in practice it is usual for preferred stock to be nonvoting)
not callable, convertible, or participating.

Stock Certificate Book

Unissued certificates of capital stock usually appear in bound books, similar in principle to a checkbook. Each page of this stock certificate book consists of a blank certificate of capital stock with stub attached. Whenever capital stock is sold to a stockholder, a certificate of capital stock is filled out, detached, and delivered to the stockholder. A memorandum of the certificate is entered on the stub of the certificate.

Certificates which have been surrendered to a corporation are canceled and attached to their respective stubs. The open stubs in the stock certificate book represent outstanding certificates of capital stock.

A certificate of capital stock and stub are illustrated on page 369.

Stock Transfer Journal

The function of the stock transfer journal (also called stock transfer register) is to record, chronologically, all capital stock transferred from one stockholder to another. The following form is an illustration of a stock transfer journal.

STOCK TRANSFER JOURNAL

TRANSFERRED BY					TRANSFERRED TO				
Date	*Name*	*Certificate No.*	*Number of Shares*	*F*	*Date*	*Name*	*Certificate No.*	*Number of Shares*	*F*

Postings are made from the stock transfer journal to individual accounts in the stockholders' ledger (see page 370).

A small corporation may not need a stock transfer journal because the number of its stock transfers is so small. In this case postings to the stockholders' ledger would be made from the stubs of the stock certificate book.

Many large corporations, with thousands of stockholders and thou-

CERTIFICATE NO. ____

FOR _____ Shares

ISSUED TO _____

_____

_____

DATED _____ 19____

FROM WHOM TRANSFERRED:

_____

_____

No. of Original Certificate	*Number of*	
	Original Shares	*Shares Transferred*

RECEIVED Certificate No. _____

for _____ shares

_____ 19_____

Countersigned
THE COMMERCE TRUST COMPANY
By _____ Authorized Officer

Registered
FIRST MANHATTAN BANK, Registrar
By _____ Authorized Officer

Stub of Stock Certificate

Royal Dairies, Inc.

No. ____ Incorporated under the laws of the State of New York ____ Shares

COMMON STOCK

THIS IS TO CERTIFY THAT _____
is the owner of _____ full paid and nonassessable shares of COMMON STOCK of the par value of $10.00 each of ROYAL DAIRIES, INC., hereinafter called the Corporation, transferable in person or by duly authorized attorney upon surrender of this certificate properly endorsed. A statement of the designations, preferences, privileges and voting powers of the shares of capital stock of each class of the Corporation and the restrictions and qualifications thereof appears on the back hereof, and this certificate and the shares of stock represented hereby are issued, received and held subject to all the provisions of the Certificate of Incorporation and By-Laws of the Corporation as amended (copies of which are on file with the Transfer Agent), to all the provisions of which the holder, by acceptance hereof, assents. This certificate is not valid unless countersigned by the Transfer Agent and registered by the Registrar.

WITNESS the seal of the Corporation and the signatures of its duly authorized officers.

Dated _____ 19____

_____ Secretary

_____ President

Stock Certificate

sands of transfers of capital stock, turn their stock transfer journals and stockholders' ledger over to independent transfer agents (banks and trust companies, for example, with special departments for this work). Thus a company might have its head office and manufacturing operations in Chicago, Detroit, or St. Louis, but its stock transfer journal and stockholders' ledger would be carried at the office of a trust company in New York.

Stockholders' Ledger

On July 7, 1954, the 22,643,973 shares of common stock of the Dow Chemical Company were owned by 50,019 stockholders. It would be obviously impractical for this company to carry, in its general ledger, a capital stock account with each of its stockholders. Instead, a controlling account called Common Stock is carried in the general ledger, the supporting detail for this controlling account being carried in a subsidiary stockholders' ledger containing 50,019 accounts.

A corporation which has more than one class of capital stock will have one controlling account for each class of stock, each controlling account being supported by a related and subsidiary stockholders' ledger. All accounts in a stockholders' ledger, being proprietary in nature, are accounts with credit balances.

Each stockholder's account in a stockholders' ledger shows the number of shares owned and information as to dates and numbers of outstanding certificates of capital stock. Credits are recorded for shares acquired by stockholders, and debits are recorded for shares disposed of. The source for these postings is the stock transfer journal.

One example of a stockholder's ledger account is shown below.

Name _____

Address _____

CERTIFICATES CANCELED				CERTIFICATES ISSUED				SHARES HELD
Date	*F*	*Certificate No.*	*Number of Shares*	*Date*	*F*	*Certificate No.*	*Number of Shares*	

Minute Book

The minute book of a corporation contains a record of the business transacted at official meetings of the company's board of directors or the company's stockholders. The minute book is important to the accountant because it is the original authority for important accounting entries and memoranda affecting the financial statements of a company. For example, the minute book would show directors' approval for the payment of dividends and bonuses, and approval of commitments to buy and sell assets of significant amount.

Corporation Accounting

Corporation accounting is distinctive because of its treatment of corporate net worth. The net worth of a corporation is represented by the following accounts:

1. One or more Capital Stock accounts, one account for each class of capital stock. The balance of each capital stock account should not be allowed to exceed the authorized capitalization for that class of capital stock as fixed by a company's certificate of incorporation.

Fundamentally, the function of an account with capital stock is to show the amount of capital actually paid to a corporation by its shareholders. However, in many cases, a capital stock account represents only a part of the contribution of a shareholder to the capital of a corporation. The many factors which make it possible for variances to exist between the value credited to the Capital Stock account of a corporation and the amount of capital actually paid in by stockholders are discussed in Chapters 19 and 20.

2. One or more proprietary or "surplus" accounts to record that part of corporate net worth not represented by accounts with capital stock. The usual surplus accounts are Paid-in Surplus (or Capital Surplus) and Retained Income (or Earned Surplus). These surplus accounts are defined in detail on page 413. It may be observed at this point, however, that paid-in capital which has *not* been credited to a capital stock account is credited to the Paid-in Surplus account. Since the paid-in capital of a corporation must be maintained intact for the protection of creditors, the accumulation of additional capital through corporate earnings is an "excess" or "overplus" of capital not legally required to be maintained intact for the protection of creditors. This particular capital, therefore, is credited to the Retained Income (or Earned Surplus) account.

The Retained Income account, in short, represents the accumulated undistributed income of a corporation. At the end of each fiscal year the account is credited with the net income earned in that year; the entry is

Profit and Loss	xxx xx	
Retained Income (or Earned Surplus)		xxx xx
To transfer net income for the year ended December 31, 19__, to the Retained Income account.		

Aside from the distinctive accounting related to its net worth accounts (and bonds payable), the accounting procedures associated with a corporation are similar to those for the single proprietorship and the partnership forms of business organization. Assets, liabilities, sales, purchases, and expenses are recorded in the same manner regardless of the form of organization assumed by a business—be it corporation, partnership, or sole proprietorship.

Consideration for Capital Stock

The capital stock of a corporation may be paid for in cash, in property, or in services. As a general rule of accounting, noncash considerations received by a corporation in exchange for its capital stock should be recorded on the books of the corporation at the fair market values of the assets received. In the last analysis, however, the considerations received will be valued as officially determined and approved by the board of directors of a corporation. These values are final. They can be set aside only by proving fraud in their establishment. Such proof is generally a very difficult legal task.

WATERED STOCK

The history of corporate finance is replete with examples of corporations which have issued capital stock to pay for overvalued assets. Capital stock issued for overvalued assets is called "watered stock." Corporation X, for example, may have taken over Corporations Y and Z for the purpose of reducing or eliminating competition. Corporation X issued $1,000,000.00 of its par-value stock to pay for the net assets of Corporations Y and Z, even though the fair market value of these assets was $750,000.00. These assets were placed on the books of Corporation X at a value of $1,000,000.00 or, alternatively, at $750,000.00 with a further debit to Goodwill of $250,000.00.

Another example is that of a corporation formed to promote a patent or to develop a mining claim. It acquired the patent or mining claim by issuing capital stock in an amount in excess of the fair market value of the properties received. On the books of the corporation both the assets received and the capital stock were, accordingly, overvalued. Again, the stock is said to be "watered."

The use of a goodwill account to cover up an overissue of capital stock, as in the example above, is untenable finance and bad accounting. It represents a misconception not only of the nature of goodwill but also of the fundamental constituents of accounting value. Although the asset values acquired in such financing may not be satisfactory to him, the accountant generally must accept them (as approved by the corporation's board of directors). This acceptance is made on the basis of full disclosure of the valuation base in the financial statements of the corporation.

Accounting for the Sale of Par Value Stock

The procedures and entries to be followed for the sale of capital stock with a par value can best be described by the use of an illustration.

Example

The Par Sales Company was incorporated March 1, 1958, with an authorized capital stock of $100,000.00, consisting of 1,000 shares of common stock, $100.00 par value per share.

Subscriptions were received, March 1, 1958, for 750 shares of common stock at a price of 100 as follows:

110 shares, $11,000.00 par, payable immediately.
640 shares, $64,000.00 par, payable 25% immediately, the balance payable in three equal installments payable monthly on the first of each month, beginning April 1, 1958.

After the following account has been opened in the general ledger

COMMON STOCK
(*Authorized* 1,000 *shares*, $100.00 *par*)

the company's entries to record its transactions will be

1958				
March 1	Cash		11,000.00	
	Common Stock			11,000.00
	To record sale of 110 shares of common stock at par for cash.			
	Subscriptions Receivable		64,000.00	
	Common Stock Subscribed			64,000.00
	To record subscriptions to 640 shares of common stock at par.			
	Cash		16,000.00	
	Subscriptions Receivable			16,000.00
	To record collection of 25% down payment on subscriptions to common stock.			
April 1	Cash		16,000.00	
	Subscriptions Receivable			16,000.00
	To record collection of installment payment, due today.			
May 1	Cash		16,000.00	
	Subscriptions Receivable			16,000.00
	To record collection of installment payment, due today.			

June	1	Cash	16,000.00	
		Subscriptions Receivable		16,000.00
		To record collection of final installment payment, due today.		
		Common Stock Subscribed	64,000.00	
		Common Stock		64,000.00
		To record the issuance of 640 shares of common stock, fully paid.		

When all installments have been collected, the subscription contracts for capital stock become paid in full; certificates of capital stock are then issued. This is illustrated by the second entry on June 1.

The function of the Common Stock account is to show the amount of common stock which has been issued. Common stock is issued to subscribers when they have paid the amounts called for by their subscription contracts for capital stock.

Debits and credits to accounts with Common Stock and Common Stock Subscribed are always made for the par values of the shares in question.

The amount of unsubscribed common stock can be easily obtained at any time by deducting the sum of the accounts for Common Stock and Common Stock Subscribed from the total authorized capitalization for common stock.[17]

SUBSCRIPTIONS RECEIVABLE (classified) If a company receives subscriptions to more than one kind of capital stock, separate accounts should be opened as, for example,

Subscriptions Receivable—Common Stock	xxx xx	
Common Stock Subscribed		xxx xx
Subscriptions Receivable—Preferred Stock	xxx xx	
Preferred Stock Subscribed		xxx xx

When the subscription contracts for these shares of capital stock have been collected, the issuance of certificates of capital stock would be reflected in the following pro forma entries:

Common Stock Subscribed	xxx xx	
Common Stock		xxx xx
Preferred Stock Subscribed	xxx xx	
Preferred Stock		xxx xx

SUBSCRIPTIONS LEDGER Subscriptions to the capital stock of a corporation, if numerous or if payable in installments, should be recorded in a subsidiary ledger, an account being maintained with each subscriber to capital stock. This subsidiary ledger would be governed by a controlling account in the general ledger called Subscriptions Receivable—Common Stock, for example.

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[17] Some accountants would prefer to use the following entries to open the books of

Uncollectible Subscriptions

The entries to be made in the event of a company's inability to collect a subscription for capital stock depend, primarily, upon statutory law and, secondarily, upon the accounting used to record the original subscription for capital stock. If the payments made by a subscriber are forfeited in favor of the corporation, they should be credited to Paid-in Surplus.

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the Conn Manufacturing Company:

1958				
March 1	Unissued Common Stock		100,000.00	
	Common Stock			100,000.00
	To record authorized capital stock.			
	Cash		11,000.00	
	Unissued Common Stock			11,000.00
	To record sale of 110 shares of common stock at par for cash.			
	Subscriptions Receivable		64,000.00	
	Unissued Common Stock Subscribed			64,000.00
	To record subscriptions to 640 shares of common stock at par.			
	Cash		16,000.00	
	Subscriptions Receivable			16,000.00
	To record collection of 25% down payment on subscriptions to common stock.			
April 1	Cash		16,000.00	
	Subscriptions Receivable			16,000.00
	To record collection of installment payment, due today.			
May 1	Cash		16,000.00	
	Subscriptions Receivable			16,000.00
	To record collection of installment payment due today.			
June 1	Cash		16,000.00	
	Subscriptions Receivable			16,000.00
	To record collection of final installment payment, due today.			
	Unissued Common Stock Subscribed		64,000.00	
	Unissued Common Stock			64,000.00
	To record the issuance of 640 shares of common stock, fully paid.			

COMMENTARY These entries may be used because of the statistical information which they give. It should be noted, however, that the first entry does not represent either a business or an accounting transaction. Unissued capital stock is not an asset. The Common Stock account, in turn, is a fiction: it is not the amount of common stock outstanding but merely the corporation's authorization to issue capital stock for value received. Authorization is merely legal permission by the state for the corporation to secure capital for its capital stock *if it is able to do so*. It is not clear why these accounts should be opened, especially since the information they contain is readily obtained otherwise.

Example

Assume that a corporation received a subscription to 10 shares of capital stock at 100, that $590.00 was collected, and that the contract was then defaulted. The entries would be

Subscriptions Receivable—Common Stock	1,000.00	
Common Stock Subscribed		1,000.00
To record subscription to 10 shares of common stock at par.		
Cash	590.00	
Subscriptions Receivable—Common Stock		590.00
To record collection on subscription to 10 shares of common stock.		
Common Stock Subscribed	1,000.00	
Subscriptions Receivable—Common Stock		410.00
Paid-in Surplus		590.00
To record the forfeiture of a subscription to 10 shares of common stock at 100; and on which $590.00 has been collected.		

The forfeited collections are credited to Paid-in Surplus (or Capital Surplus) as capital invested in the business. The collections are not income because they do not represent earnings realized through the sale of an asset nor do they constitute compensation for the furnishing of capital or services.

Many states require a refund to be made to the defaulting subscriber for an amount equal to total collections less expenses and discount incident to the resale of the stock, thus:

Subscriptions Receivable—Common Stock	1,000.00	
Common Stock Subscribed		1,000.00
To record subscription to 10 shares of common stock at par.		
Cash	590.00	
Subscriptions Receivable—Common Stock		590.00
To record collection on subscription to 10 shares of common stock.		
Common Stock Subscribed	1,000.00	
Subscriptions Receivable		1,000.00
To record the forfeiture of a subscription originally made for 10 shares of common stock at 100.		
Subscriptions Receivable—Common Stock (original subscriber)	50.00	
Cash	950.00	
Common Stock		1,000.00
To record cash sale of 10 shares of common stock at 95. And to charge original subscriber with discount of $50.00 incurred on the sale of these shares.		
Subscriptions Receivable—Common Stock (original subscriber)	540.00	
Cash		540.00
To record refund of balance due to original subscriber.		

Subscriptions Receivable on the Balance Sheet

Accounting for capital stock which has been subscribed for on the installment plan of payment raises the question of proper classification of the Subscriptions Receivable and Capital Stock Subscribed accounts on the balance sheet. Subscriptions are debts (written promises to pay for capital stock) payable to the corporation at dates specified by the subscription contract. Because subscriptions to capital stock constitute contracts which are legally enforceable against their makers, some accountants handle subscription contracts to capital stock as a special class of accounts receivable, and capital-stock-subscribed accounts as intermediate or provisional, but none the less real, elements of net worth. From this point of view it follows that any debit in the Subscriptions Receivable account should appear in the balance sheet as an asset, distinctively labeled, and classified as a current asset if it is to be collected within twelve months. The credit balance in the Capital Stock Subscribed account would appear in the balance sheet as a part of corporate net worth. These classifications are supported by the legal view that a subscriber to capital stock is legally a stockholder even though his subscription has not been paid.[18]

Other accountants favor a more conservative placement of the Subscriptions Receivable and Capital Stock Subscribed accounts in the balance sheet. These accountants take the view that subscription contracts are executory in nature, both contracting parties being still required to deliver consideration. Accordingly, debit balances in accounts with subscribers to capital stock represent an amount of capital which is yet to be collected rather than capital received and available for corporate purposes. From this point of view, therefore, Subscriptions Receivable should appear on the balance sheet as a deduction from Capital Stock Subscribed. The difference between the balances of the two accounts represents the actual amount of capital invested in the corporation by subscribers to capital stock as of the date of a given balance sheet.

Since one of the functions of the balance sheet of a business is that of showing the amount of capital *invested* in a business, the classification of subscriptions receivable as a negative element of corporate net worth appears logical. This classification is unquestionably obligatory if there is any question as to the collectibility of a subscription to capital stock.

Discount on Capital Stock

Where the law of a state permits, capital stock may be sold at a discount from its par value. If 100 shares of $100.00 par value common stock were sold by a corporation at a price of 95, the entry would be

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[18] *Hawley* v. *Upton*, 102 U. S. 314 (1880).

Cash	9,500.00	
Discount on Common Stock	500.00	
Common Stock		10,000.00

To record sale of 100 shares of $100.00 par value stock at 95.

If the stock had been subscribed for on the installment plan of payment, the entry would have been

Subscriptions Receivable—Common Stock	9,500.00	
Discount on Common Stock Subscribed	500.00	
Common Stock Subscribed		10,000.00

To record subscriptions to 100 shares of common stock at 95.

The accounts with Common Stock and Common Stock Subscribed are both set up at par values.

On the balance sheet the Discount on Stock account should be deducted from Common Stock in the manner shown in the illustration on page 423. Discount on stock is a valuation account for common stock. It is *not* an asset.

A stockholder who has purchased his stock from the corporation at a price below par is liable for the discount to *creditors* of the corporation only; and his liability relates only to corporate debts contracted during the period of his ownership of stock. On resale of this stock, the new purchaser is not liable for the discount unless his purchase is made with constructive knowledge that the purchased stock is not fully paid. This might be indicated by omission of the words "fully paid" from the certificate of capital stock. The liability of the original stockholder for discount on stock which is subsequently transferred applies to a time period which varies with the laws of the several states. In New York the transferor remains liable for a period of two years after the date of the disposition of his stock.

If the Discount on Stock account is written off—an act which is neither necessary nor desirable accounting wise—it is usually held that the capital stock related to this discount then becomes fully paid. To support this position, however, it would seem necessary for the minute book of the corporation to show that directors have formally approved the write-off of discount on capital stock for the purpose of extinguishing the discount liability of stockholders.

Premium on Capital Stock

A corporation may sometimes be able to make a successful sale of its capital stock at a price above par value. The consideration received in excess of par value is credited to the Paid-in Surplus (or Capital Surplus) account, thus:

Cash	11,000.00	
Common Stock		10,000.00
Paid-in Surplus		1,000.00

To record the sale of 100 shares of common stock, $100.00 par, at a price of 110.

Sometimes the premium received is placed in a temporary account called Premium on Common Stock. This account is later closed to the Paid-in Surplus (or Capital Surplus) account.

If the stock had been subscribed for on the installment plan of payment, the original entry would have been

Subscriptions Receivable—Common Stock	11,000.00	
Common Stock Subscribed		10,000.00
Paid-in Surplus Subscribed		1,000.00

To record subscriptions to 100 shares of common stock, $100.00 par, at a price of 110.

When the subscription contracts have been collected, the stock would be issued and the following entry made:

Common Stock Subscribed	10,000.00	
Paid-in Surplus Subscribed	1,000.00	
Common Stock		10,000.00
Paid-in Surplus		1,000.00

To record the issuance of 100 shares of common stock, $100.00 par, fully paid; and the realization of paid-in surplus, $1,000.00.

Bonus of Capital Stock

As a part of its program to raise capital, a corporation may offer some of its preferred stock with a "bonus" of common stock. For example, ten shares of preferred stock, $100.00 par, with a bonus of two shares of common stock, $100.00 par, for a group price of $1,000.00. The entry for the sale of such a block of stock might be

Cash	1,000.00	
Bonus Stock Expense	200.00	
Preferred Stock		1,000.00
Common Stock		200.00

To record sale of block of 10 shares of preferred stock and 2 shares of common stock at a group price of $1,000.00.

The bonus in this kind of transaction is in reality nothing but discount on capital stock. The bonus, therefore, should more properly be debited to the Discount on Common Stock account. Capital stock issued at a discount of 100% may rightly be regarded by the purchaser as a somewhat dubious kind of "bonus," especially in the light of his liability to corporate creditors for the full amount of stock discount. To overcome this objection, a corporation may offer common treasury stock instead of unissued stock as the

bonus. (*Note:* Treasury stock, defined on page 399, may be sold at any price without liability to the purchaser.)

If, in the foregoing example, the preferred stock could have been sold separately at a price of 98, the entry should be

Cash	1,000.00	
Discount on Preferred Stock	20.00	
Discount on Common Stock	180.00	
Preferred Stock		1,000.00
Common Stock		200.00

To record sale of block of 10 shares of preferred stock and 2 shares of common stock at a group price of $1,000.00, cash value of the preferred stock being $98.00 per share on the market.

This entry describes the conditions of stock issuance. An entry of this kind, although superior, cannot be made when it is not possible to obtain the market value for either of the stocks in question.

Partnership to Corporation

The accounting steps necessary to recognize the conversion of a partnership into a corporation are summarized in the two examples below. In the first example, the corporation continues to use the books and the accounting values of the partnership. In the second example, the corporation opens new books using values representing current market values as determined by the board of directors or by an accredited appraisal company as of the date on which the corporation acquires title to the net assets of the partnership.

Both examples are based on the following balance sheet of A. C. Bryce and E. K. Burger, December 31, 19__:

Bryce & Burger

BALANCE SHEET, DECEMBER 31, 19__

Assets

Current Assets:		
Cash		$ 18,000.00
Accounts Receivable	$77,000.00	
Less Allowance for Bad Debts	1,000.00	76,000.00
Merchandise Inventory		48,000.00
		$142,000.00

Fixed Assets:

	Cost	*Allowance for Depreciation*	*Net*	
Delivery Equipment	$ 4,000.00	$2,000.00	$ 2,000.00	
Office Equipment	3,000.00	1,200.00	1,800.00	
Building	22,000.00	3,000.00	19,000.00	
Land	10,000.00		10,000.00	32,800.00
				$174,800.00

Liabilities and Capital

Current Liabilities:		
Accounts Payable		$ 60,800.00
Long-Term Liabilities:		
Mortgage Payable		7,000.00
		$ 67,800.00
Capital:		
A. C. Bryce, Capital	$57,000.00	
E. K. Burger, Capital	50,000.00	107,000.00
		$174,800.00

The partners decide to incorporate their business under the name of Bryce & Burger, Inc. A corporation is organized with an authorized capital stock of 2,000 shares of $100.00 par value.

Example 1

In this example the books and values of the partnership are continued in use by the corporation. Essentially, the change to the corporate form of business organization is recognized by replacing the capital accounts of the partners with a capital stock account. The entry will be

A. C. Bryce, Capital	57,000.00	
E. K. Burger, Capital	50,000.00	
Capital Stock		107,000.00
To record conversion of the partnership business into a corporation, 570 shares of Bryce & Burger, Inc., to A. C. Bryce and 500 shares to E. K. Burger.		

Example 2

In this example a new set of books, incorporating individual sales valuations, is opened by the corporation. On the basis of a professional appraisal, it is established that the assets of the partnership are fairly valued as follows:

	Book Value	*Sale Value*
Cash	$ 18,000.00	$ 18,000.00
Accounts Receivable	76,000.00	72,580.00
Merchandise Inventory	48,000.00	48,000.00
Delivery Equipment	2,000.00	1,700.00
Office Equipment	1,800.00	1,800.00
Building	19,000.00	25,000.00
Land	10,000.00	15,000.00
Goodwill	0.00	7,500.00
	$174,800.00	$189,580.00

The entries to be made upon the books of the partnership are

Bryce & Burger, Inc.	121,800.00	
Accounts Payable	60,800.00	
Mortgage Payable	7,000.00	
Cash		18,020.00
Accounts Receivable		77,000.00
Allowance for Bad Debts	1,000.00	
Merchandise Inventory		48,000.00
Delivery Equipment		4,000.00
Allowance for Depreciation—Delivery Equipment	2,000.00	
Office Equipment		3,000.00
Allowance for Depreciation—Office Equipment	1,200.00	
Building		22,000.00
Allowance for Depreciation—Building	3,000.00	
Land		10,000.00
Profit on Sale of Business		14,780.00

To charge Bryce & Burger, Inc., for net assets sold this company for a price of $121,800.00, detailed as follows:

	Sales Price	
Cash	$ 18,020.00	
Accounts Receivable	72,580.00	
Merchandise Inventory	48,000.00	
Delivery Equipment	1,700.00	
Office Equipment	1,800.00	
Building	25,000.00	
Land	15,000.00	
Goodwill	7,500.00	
	$189,600.00	
Accounts Payable	$60,800.00	
Mortgage Payable	7,000.00	67,800.00
		$121,800.00

(*Note:* The increase in cash from $18,000.00 to $18,020.00 is explained in the cash receipts entry of $20.00 below.)

Profit on Sale of Business	14,780.00	
A. C. Bryce, Capital		7,390.00
E. K. Burger, Capital		7,390.00

To distribute profit on sale of business to partners, 50–50.

Cash	20.00	
A. C. Bryce, Capital		10.00
E. K. Burger, Capital		10.00

For cash received to equalize balances of partners' capital accounts with par value of corporate stock to be distributed to them, $121,800.00.

Stock of Bryce & Burger, Inc.	121,800.00	
Bryce & Burger, Inc.		121,800.00

For 1,218 shares common stock, $100.00 par, received in payment of net assets transferred to Bryce & Burger, Inc.

A. C. Bryce, Capital	64,400.00	
E. K. Burger, Capital	57,400.00	
Stock of Bryce & Burger, Inc.		121,800.00

To record distribution of stock to partners.

The entry on the books of the corporation will be simply

Cash	18,020.00	
Accounts Receivable	77,000.00	
Merchandise Inventory	48,000.00	
Delivery Equipment	1,700.00	
Office Equipment	1,800.00	
Building	25,000.00	
Land	15,000.00	
Goodwill	7,500.00	
Allowance for Bad Debts		4,420.00
Accounts Payable		60,800.00
Mortgage Payable		7,000.00
Common Stock		121,800.00

To record issue of 1,218 shares of common stock, $100.00 par, to A. C. Bryce (644 shares) and E. K. Burger (574 shares) in payment of net assets purchased from Bryce & Burger.

In this last entry the accounts receivable are recorded at their sale valuation of $72,580.00, net, by recording a gross debit value for them in Accounts Receivable, $77,000.00, and a credit value in the Allowance for Bad Debts, $4,420.00. This is done for the purpose of maintaining agreement of the balance of the Accounts Receivable controlling account with the total of the balances of the individual accounts receivable in the subsidiary ledger.

The procedures illustrated by the entries above are summarized as follows:

On the books of the partnership

1. Close the books in the manner of any normal closing of the books at the end of an accounting period.

2. *Debit* the corporation for the net assets transferred to it. The amount of this debit will be the price at which the net assets were sold to the corporation. It will also be the valuation of the capital stock to be received by the partnership from the corporation.

Debit the individual liability accounts in order to close out their balances.

Credit the individual asset accounts in order to close out their balances.

Any difference between the debit to the corporation and the book value of the net assets transferred is a profit or loss on the sale of these net assets. The profit should be recorded in an account like "Profit on Sale of Business" and the loss in the account "Loss on Sale of Business."

3. Distribute the profit or loss on the sale of the business to the partners in their current profit and loss sharing ratios.

After these entries have been posted, the balances in the partners' capital accounts should equal the amount of capital stock to be received by them. To secure these balances, small cash adjustments of partners' capital accounts may be necessary.

4. *Debit* an asset account and *credit* the corporation for the capital stock received in payment of the net assets transferred.

5. Distribute the capital stock to the partners. This entry will close the capital accounts of the partners.

On the books of the corporation

On the books of the corporation the only entry will be

Assets (in detail)	xxx xx	
Liabilities (in detail)		xxx xx
Capital Stock		xxx xx

To record capital stock issued in payment of net assets purchased from _____.

PROBLEMS

Problem 18–1. On October 1, 19__, the Duranium Sales Company was organized with an authorized capital stock of 10,000 shares of common stock of $100.00 par value. The following five transactions then occurred:

1. Issued 5,000 shares of common stock for mineral properties acquired from Allen E. Benter at a price of $500,000.00. The cost of these properties to Mr. Benter was $100,000.00. The price of $500,000.00, fixed by independent appraisers, was approved by the board of directors.
2. Sold 1,000 shares of common stock at 100 for cash, $100,000.00.
3. Received subscriptions to 2,000 shares of common stock at par.
4. On November 10, 19__, one half of the subscriptions were paid in full, $100,000.00. Certificates of capital stock were issued.
5. On December 15, 19__, partial payments of 20% were received on each of the remaining subscriptions, $20,000.00.

Required

1. What entries should be made to record these transactions? Post to appropriate T accounts.
2. Balance sheet, December 31, 19__.

Problem 18–2. The Union Sales Company was incorporated on July 1, 19__, with an authorized capital stock of

1,000 shares 6% preferred stock, $100.00 par, and
5,000 shares common stock, $100.00 par.

The preferred stock was sold at par for cash, $100,000.00.

Five hundred shares of common stock were sold at par for cash, $50,000.00.

Subscriptions were received for 4,000 shares of common stock at par, payable 25% immediately, the balance due in three equal monthly installments, beginning August 1. These installments were paid on their due dates.

Required

1. What entries should be made to record these transactions? Post to appropriate T accounts.
2. Balance sheet, September 1, 19__.
3. Balance sheet, October 1, 19__.

Problem 18–3. On November 20, 19__, the Hurley Sales Company was organized with an authorized capital stock of

$ 100,000.00 6% preferred stock, $100.00 par, and
1,000,000.00 common stock, $100.00 par.

The following five transactions then occurred:

1. Sold 1,000 shares of preferred stock at 110 for cash, $110,000.00.
2. Sold 5,000 shares of common stock at 100 for cash, $500,000.00.
3. Received subscriptions to 2,000 shares of common stock at 110.
4. On December 1, 19__, one half of the subscriptions were paid in full, $110,000.00. Certificates of capital stock were issued.
5. On December 29, 19__, partial payments of 20% were received on each of the remaining subscriptions, $22,000.00.

Required

Balance sheet, December 31, 19__.

Problem 18–4. The ABC Corporation was organized on May 1, 19__, with an authorized capital stock of 1,000 shares of 6% preferred stock, $100.00 par, and 5,000 shares of common stock, $100.00 par. During May the following transactions occurred:

1. One hundred shares of preferred stock were sold at par for cash.
2. Received subscriptions for 500 shares of common stock at par.
3. Received subscriptions for 600 shares of preferred stock at par.
4. Received subscriptions for 1,500 shares of common stock at par.
5. Three hundred shares of preferred stock were sold for cash at a price of 110.
6. Received $20,000.00 cash as the total of partial payments on each of the subscriptions of transaction #3.
7. Received subscriptions for 1,000 shares of common stock at 105.
8. Received $200,000.00 cash on the subscriptions of transactions #2 and #4.
9. Received $40,000.00 cash on the subcriptions of transaction #3. The subscriptions being paid in full, certificates were issued for 600 shares of preferred stock.
10. Received $105,000.00 cash on the subscriptions of transaction #7. Certificates were issued for 1,000 shares of common stock.

Required

1. What entries should be made to record these transactions? Post to appropriate T accounts.
2. Balance sheet, May 31, 19__.

Problem 18–5. The Borodax Corporation was organized on July 1, 19__, with an authorized capital stock consisting of 5,000 shares 6% cumulative preferred stock and 20,000 shares common stock, all stock of $100.00 par value. Over the next six months the following transactions occurred:

1. Sold 3,000 shares preferred stock at par for cash, $300,000.00.
2. Sold 500 shares preferred stock at 110 for cash, $55,000.00.
3. Sold 5,000 shares common stock at par for cash, $500,000.00.
4. Sold 10,000 shares common stock at 105 for $1,050,000.00 on terms of 20% down, and the balance payable in two equal installments, October 1 and December 1.
5. All installment payments were collected on the subscription contracts for 9,500 shares of common stock, $798,000.00.
6. On one subscription contract for 400 shares of common stock the cash collected was the down payment of 20%, $8,400.00; and the first installment of 40%, $16,800.00. On the second installment of 40%, or $16,800.00, it was necessary to give an extension for payment until February 1.
7. On one subscription contract for 100 shares of common stock, only the down payment of 20% was collected. This contract was declared forfeited with no refund to the defaulting subscriber.
8. Net income for the period July 1–December 31 amounted to $50,000.00. (Debit Cash.)

Required

1. Entries to record the above transactions. Post to appropriate T accounts.
2. Balance sheet, December 31, 19__.

Problem 18–6. C. W. Morse and George Simpson decide to combine their businesses under the name of Morse & Simpson, Inc. A corporation is formed on July 1, 19__, with an authorized capital stock of $100,000.00 6% cumulative preferred stock, and $100,000.00 common stock, both stocks of $100.00 par value. Preferred stock is issued in payment of net assets based on the following balance sheet values:

Assets	*C. W. Morse*	*George Simpson*
Cash	$ 8,116.00	$ 3,624.00
Accounts Receivable	38,027.00	18,408.00
Notes Receivable	5,000.00	
Merchandise Inventory	20,000.00	16,118.00
Delivery Equipment	3,200.00	1,800.00
Furniture and Fixtures	2,000.00	1,000.00
Building	10,000.00	
Land	5,000.00	
Marketable Securities		4,000.00
	$91,343.00	$44,950.00

Liabilities and Capital

Accounts Payable	$30,114.00	$10,642.00
Notes Payable		5,000.00
Mortgage Payable (due in six years)	4,000.00	
C. W. Morse, Capital	57,229.00	
George Simpson, Capital		29,308.00
	$91,343.00	$44,950.00

C. W. Morse and George Simpson withdraw cash from their respective businesses sufficient to equalize their capital accounts to 572 and 293 shares of preferred stock, respectively. One hundred shares of preferred stock at 110 are sold for cash to R. S. Power.

In addition, subscriptions for 600 shares of common stock at 100 are received, payable in 30 days. Twenty-five shares of common stock are sold at par for cash.

Required

1. Entries to record the above transactions.
2. Balance sheet as of date of organization (assuming that subscriptions were taken as of that date).

Problem 18–7.

Lowe & Bell

BALANCE SHEET, JULY 1, 1958

Assets

Cash		$ 6,000.00
Accounts Receivable	$ 9,000.00	
Less Allowance for Bad Debts	1,000.00	8,000.00
Merchandise Inventory		10,000.00
Prepaid Advertising		300.00
Miscellaneous Equipment	$3,000.00	
Less Allowance for Depreciation	1,000.00	2,000.00
Building	$20,000.00	
Less Allowance for Depreciation	4,000.00	16,000.00
Land		1,000.00
		$43,300.00

Liabilities and Net Worth

Accounts Payable		$ 4,500.00
Notes Payable		2,000.00
Total Liabilities		$6,500.00
Net Worth:		
J. C. Lowe, Capital	$16,400.00	
R. G. Bell, Capital	20,400.00	36,800.00
		$43,300.00

The two partners had previously made application for a charter to operate as The Lowell Corporation. On June 30, 1958, the charter was approved and authority granted to issue 1,000 shares of common stock of the par value of $50.00 per share.

On July 1, 1958, the new corporation took over all the assets and liabilities of the partnership at balance sheet values except as follows:

1. Accounts receivable were expected to yield total collections of $7,500.00.
2. The inventory was to be valued at current replacement cost, $11,000.00.
3. No value was given to prepaid advertising.
4. The Allowance for Depreciation—Building account was to be adjusted so as to have a balance of $5,000.00.
5. The new corporation also sold 80 shares of common stock at par for cash to Alexander L. Strong, one of the incorporators of the new company.

Required

1. Journal entries on the books of the partnership to record
   a) the sale of the net assets to the corporation,
   b) the receipt of certificates of capital stock from the corporation, and
   c) the dissolution of the partnership.
2. Journal entries on the books of the corporation to record the assets received from Lowe, Bell, and Strong.
3. Balance sheet of the corporation, July 1, 1958.

Problem 18–8. W. H. Beal and Clark & Clark were competing retail drugstores in an eastern city of 40,000 population. The two stores were located on diagonally opposite corners at the intersection of Third Avenue and Hudson Street. The Clark store was a partnership comprised of Henry L. Clark and his brother, Arthur J. Clark. Henry L. Clark, who acted as manager, possessed the larger capital investment. They shared profits in the ratio of 70–30, respectively.

The condensed balance sheets of the two businesses on December 31, 19__, were as follows:

	W. H. Beal	*Clark & Clark*
Assets		
Cash	$ 211.32	$ 897.87
Accounts Receivable	14.77	1,748.17
Merchandise Inventory	6,220.31	7,760.63
Prepaid Expenses	121.18	386.42
Fixtures and Equipment	3,822.40	7,214.20
	$10,389.98	$18,007.29
Liabilities and Capital		
Accounts Payable	$ 2,184.25	$ 5,016.72
Notes Payable		5,000.00
Total Liabilities	$ 2,184.25	$10,016.72
W. H. Beal, Capital	8,205.73	
Henry L. Clark, Capital		5,590.56
Arthur J. Clark, Capital		2,400.01
	$10,389.98	$18,007.29

After long consideration of their respective interests, Mr. Beal and the Clark brothers decided that it would be mutually advantageous to consolidate their enterprises. They agreed, therefore, to combine their businesses in a new corporation to be known as the Union Drug Company. The new corporation was formed and assumed the assets and liabilities of the two drugstores at book values after giving effect to the following merger terms, which were mutually agreed upon:

1. The authorized capital of the new corporation was to be $20,000.00 of 7% cumulative nonvoting preferred stock, $100.00 par; and $30,000.00 of common stock, $100.00 par.
2. The accounts receivable of Clark & Clark were conservatively estimated to be worth $1,250.00, the merchandise at $6,000.00, and the fixtures and equipment at $5,000.00.
3. The net assets of W. H. Beal were to be taken over by the corporation at a lump-sum value of $10,000.00.
4. Before turning their net assets over to the corporation, Henry L. Clark and Arthur J. Clark were to make additional capital investments in cash sufficient to bring their capital account credits up to $5,000.00 and $2,000.00, respectively.

Upon assuming the assets and liabilities of the two enterprises, January 1, 19__, the Union Drug Company issued its common stock at par in payment for the net assets received. Organization expenses were privately absorbed by the incorporators.

Arthur J. Clark subscribed to $3,000.00 of the preferred stock of the Union Drug Company at par, making an immediate cash payment of $1,000.00 and agreeing to pay the balance of $2,000.00 on or before July 1, 19__.

Required

Construct the opening balance sheet of the Union Drug Company.

Chapter 19

NO-PAR STOCK / DIVIDENDS / TREASURY STOCK

No-Par Value Stock: Introductory

Most states permit corporations to sell capital stock having no par value, although some states specify that the sales price shall not be less than a certain minimum price, $5.00 per share, for example. Subject to this kind of statutory restriction, no-par capital stock may be sold at any price. Irrespective, therefore, of the price at which it is sold, no-par capital stock issued upon the collection of subscriptions to capital stock is fully paid stock. No liability attaches to the stockholder. Each share of no-par stock, besides being fully paid, participates equally in dividend distributions and in the assets of the corporation in the event of its dissolution.

In some states it is required by statutory enactment that, in lieu of a par value, all no-par value stock must have a certain "stated" or "declared" value. Section 2 of the Business Corporations Law of Pennsylvania defines stated value as follows:

> Stated capital means, at any particular time, the sum of the par value of all shares then issued having a par value, the consideration received by a business corporation for all shares then issued without par value, except such part thereof as may have been allocated otherwise than to stated capital in a manner permitted by this act, and such other amounts as may have been transferred to the stated capital account of the corporation, whether from the issue of shares as a share dividend, or otherwise, minus such formal reductions from such sum as may have been affected in a manner permitted by this act.

The accounting for no-par stock with a "stated value" may parallel that used for par value stock, i.e., stated value would take the place of par value in the accounts. If the subscription price per share were more than stated value, the amount collected in excess of stated value would be credited to Paid-in Surplus. Alternatively and better, it would seem, is the practice of handling the collected subscription price of no-par capital stock as paid-in capital—all credited to the Capital Stock account. In both cases, the credit to Capital Stock should be equal to at least the minimum amount per share, if any, specified by the law of the state of a company's incorporation.

Accounting for the Sale of No-Par Value Stock

Since state laws vary widely with respect to capital stock of no par value, it is well to be familiar with the laws of the state of incorporation when entries are being framed to recognize specific transactions involving the sale of no-par-value capital stock.

In general, however, the accounting entries for the sale of no-par value capital stock (without stated value) are relatively simple. First of all there are no accounts for authorized or unissued capital stock nor for discount or premium on stock. Where capital stock of no-par value is sold for cash, the amount of cash received is credited to the Capital Stock account. If no-par stock is sold on the installment plan of payment, the amount of the subscription contract is credited to the Capital Stock Subscribed account.

Example

The No-Par Sales Company was organized July 1, 1958, with an authorized capitalization of 10,000 shares of no-par value common stock. Of these shares, 9,000 shares were sold as follows:

On July 1, 3,000 shares were sold for cash at $20.00 per share.
On July 10, 2,000 shares were sold for cash at $25.00 per share.
On July 20, 4,000 shares were sold at $30.00 per share on terms of 1/6 down, the balance payable in two equal monthly installments, beginning August 20.

Assuming all collections to have been made as contracted, the following entries would be recorded:

1958					
July	1	Cash		60,000.00	
		Common Stock			60,000.00
		To record cash sale of 3,000 shares of no-par stock at 20.			
	10	Cash		50,000.00	
		Common Stock			50,000.00
		To record cash sale of 2,000 shares of no-par stock at 25.			
	20	Subscriptions Receivable		120,000.00	
		Common Stock Subscribed			120,000.00
		To record subscriptions to 4,000 shares of no-par stock at 30.			
		Cash		20,000.00	
		Subscriptions Receivable			20,000.00
		To record down payment on subscriptions to capital stock.			
Aug.	20	Cash		50,000.00	
		Subscriptions Receivable			50,000.00
		To record installment payment, due today.			

Sept.	20	Cash		50,000.00	
		Subscriptions Receivable			50,000.00
		To record installment payment, due today.			
		Common Stock Subscribed		120,000.00	
		Common Stock			120,000.00
		To record the issuance of 4,000 shares of common stock, fully paid.			

After these entries have been posted, the capital stock account of the corporation will be

COMMON STOCK
(Authorized 10,000 shares, no-par value)

				1958			
				July	1	3,000 shares	60,000.00
					10	2,000 shares	50,000.00
				Sept.	20	4,000 shares	120,000.00

Each share of the 9,000 shares of outstanding no-par value capital stock represents a proprietary claim of $25.56, irrespective of the amount which that share contributed to the invested capital of the corporation.

Organization Expenses

Organization expenses are the reasonable costs incurred in bringing a corporation into existence. They are the initial costs of establishing the corporate entity—expenditures incurred for such items as legal expenses, charter fees, services of promoters, and other organizational costs. These costs are properly debited to the Organization Expense account by such entries as

Organization Expense		10,000.00	
Cash			10,000.00
Payment to James E. Allen for his services as promoter.			

or

Organization Expense		10,000.00	
Common Stock			10,000.00
To record issue of 100 shares of common stock to James E. Allen in payment of his services as promoter.			

Over the weeks, months, or years in which a company operates as a going concern, it should be obvious that a corporation can earn no net income unless its costs, including organizational costs, have been recovered through revenues. Since true initial organization expenses like legal and charter fees are compulsory costs of the right to exist, it is logical for these costs to be equitably and periodically allocated as charges against the income of the fiscal years over which the corporation exists as a going concern. Organization expenses, then, are intangible assets whose cost should be written off over the revenue-earning life of the corporation incurring

them. The amount of each write-off—which, theoretically, should be in equal annual amounts—is a charge against periodic income.

In practice, corporations have generally preferred to write off organization expenses quickly, the period of write-off being confined to five years or less. This accounting has been followed on the grounds of bookkeeping convenience and conservatism, i.e., a desire to eliminate the so-called "questionable value" of organization expenses from the assets of the balance sheet. In practice, the write-offs have been made, improperly, to a corporate surplus account.

As before stated, accounting theory clearly indicates that organization expenses are costs applying to the life period of a corporation. Since these costs are charges against revenues, some support can be given to the write-off of these costs against the revenues of a shorter time period and to the general corporate practice of systematically writing off organization expenses over a short period of time (i.e., three to five years, for example). The point of major import in this accounting is that these write-offs of organization expense should be made against current income; and that, in any given period, the amount of a write-off should not cause the net income of the period to be stated unfairly. This position is given further support by the fact that subsequent expenditures for the maintenance or improvement of the corporate organization (while the company is operating as a going concern) are consistently and properly debited to expense.

On the balance sheet the Organization Expense account should appear as the last item of the group for intangible assets.

The costs of printing stock certificates, accounting records, and similar items represent values of limited life. These costs should be an expense of the period or periods in which they are consumed. If the values involved are relatively unimportant, they may be debited to expense in the first year of corporate operations.

From the standpoint of accounting theory, the propriety of writing off organization expenses against periodic income cannot be questioned. There are some difficulties, however, in precisely applying the theory to practice. The amount of a periodic write-off of organization expense, for example, may not be correct because of inability on the part of either management or accountant to establish accurately the factors of time and consumption. The amount of a periodic write-off, further, may be of such negligible proportion that the worth-whileness of the write-off entry may be questioned. These particular difficulties, however, do not invalidate the theory of systematically writing off organization expenses against periodic income.

Cash Dividends

A cash dividend may be paid upon the outstanding capital stock *of record* of a corporation provided that the dividend is legal and has been

formally declared by the company's board of directors. Dividends are payable from the earned income of a corporation. This does not mean that dividends declared in one accounting period must have been earned in that period; they may be declared as payable from the undistributed earnings of past periods. The general rule of corporate practice today is simply that cash dividends are payable from a company's undistributed earned income. The payment of an unearned cash dividend, aside from question as to its legality, would have the unfavorable effect of reducing the *invested capital* of a corporation.

While it is true that, in most cases, cash dividends are payable from the undistributed income of a corporation, an exception—approved by many states—should be noted: In the absence of statutory or charter provision to the contrary, dividends may legally be paid from the capital surplus account of a corporation[1] and from paid-in surplus.[2]

There is general agreement among the states of the United States that dividends, to be legal, must not reduce the net worth of a corporation below an amount equal to its stated capital (see definition, page 400).[3]

The discussion of dividends in the rest of this book will be limited to dividends payable from income.

A cash dividend is declared—usually quarterly or semiannually—payable, on a stated future date, at a stated rate or amount per share to stockholders of record of a stated date, thus:

General Stores Incorporated

The board of directors today declared a quarterly dividend of one dollar ($1.00) per share on the $20.00 par value common stock of this Company, payable October 1, 1958, to stock of record at the close of business, September 15, 1958.

September 3, 1958 — *Milton E. Seeley*, Secretary

Directors are not obligated to declare dividends. "When a corporation has a surplus, whether a dividend shall be made, and if made, how much it shall be, and when and where it shall be payable, rest in the fair and honest discretion of the directors uncontrollable by the courts."[4]

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[1] *MacIntosh* v. *Flint & Pere Marquette Railway Co.*, 34 Fed. 582, 601.

[2] 14 Corpus Juris 806.

[3] In no case should dividend payments impair the capital stock of a corporation. *Williams* v. *Western Union Telegraph Co.*, 93 N. Y. 162, 192; *Berryman* v. *Bankers' Loan Insurance Co.*, 117 App. Div. 730, 102 N. Y. 695; *Miller* v. *Bradish*, 28 N.W. 594 (Iowa). In New Jersey, however, it is not unlawful to pay dividends out of profits even though the capital be in fact impaired. *Goodnow* v. *American Writing Paper Co.*, 73 N. J. Eq. 692, 69 A. 1014. Such dividend payments, on the other hand, must not operate to impair the rights of creditors. *Williams* v. *Boice*, 38 N. J. Eq. 364, 370.

[4] *Williams* v. *Western Union Telegraph Co.*, N. Y. 162, 192.

Even if profits have been earned, directors may decide to withhold dividend payments in order to conserve or build up working capital. Furthermore, their ability to declare cash dividends may be restricted by their company's weak current position. A low cash balance would have a direct and adverse effect upon the ability of a company to pay a cash dividend. Dividends depend not only upon the existence of undistributed earnings—an adequate balance in the Retained Income (or Earned Surplus) account—but also upon the availability of cash for their payment. A corporation might borrow money in order to pay a dividend but such an act would usually be considered unwise.

As soon as a dividend has been declared, it becomes a liability of the corporation.[5] A typical entry for the declaration of a dividend would be

June 10	Retained Income (or Earned Surplus)	9,070.00	
	Dividends Payable, Preferred Stock		1,500.00
	Dividends Payable, Common Stock		7,570.00
	To record quarterly dividends declared today:		
	1½% on preferred stock, par $100,000.00 = 1,500.00;		
	2% on common stock, par $378,500.00 = 7,570.00.		
	Both dividends payable July 1, 19__, to stock of record		
	June 20, 19__.		

The payment of the dividend liability would be recorded by this entry:

July 1	Dividends Payable, Preferred Stock	1,500.00	
	Dividends Payable, Common Stock	7,570.00	
	Cash		9,070.00
	To record payment of dividends declared June 10.		

In the absence of dividend declarations, dividends on cumulative preferred stocks "accumulate." These accumulations, or dividend arrearages, are not liabilities. They should appear on the balance sheet in the form of a footnote or parenthetical notation.

Accounting for cash dividends on no-par stock is similar to that for par value stock. The amount of the dividend liability on no-par stock is the number of shares entitled to participate in the dividend multiplied by the amount of the cash dividend per share, which is always stated in the dividend declaration.

Dividends Payable in Capital Stock

The declaration of a dividend payable in cash reduces the net worth of a corporation. The declaration of a dividend payable in capital stock, however, does not change net worth. A dividend payable in capital stock merely transfers a part of the Retained Income (or Earned Surplus) account to the Common Stock account.

A dividend payable in capital stock may be declared for a number of reasons:

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[5] *Bryan* v. *Welch*, 74 Fed. (2d) 964 (1935).

1. To consolidate more of the net worth of a corporation into its permanent capital stock account. This done, the act is official record of the fact that the amount transferred is retained income (or earned surplus) *permanently invested* in the company, i.e., funds equal to this amount have been permanently invested in the corporation.
2. To reduce the pressure of stockholders for dividends by reducing the balance of the Retained Income (or Earned Surplus) account.
3. To increase the total of dividends payable in cash without increasing the rate of dividend. The old dividend rate may be applied to the increased amount of capital stock outstanding.
4. To lower the price of a company's capital stock to better trading levels on stock exchanges. By creating a broader market for its securities, a company hopes that the new price range of its capital stock will be more attractive to individual investors, that a wider distribution of its stock will result and that, generally, the interest of the public in the corporation will be increased.
5. To reduce the amount of earnings per share of capital stock.
6. To conserve working capital, especially cash.

Each share of a dividend payable in capital stock of par value will be recorded in the entry of dividend declaration at its par value.

Example

The Z Corporation has a net worth consisting of $100,000.00 common stock (par value, $100.00), and retained income, $120,000.00. Directors of the company declare a dividend of 50%, payable in common stock:

Retained Income	50,000.00	
Dividend Payable in Common Stock . .		50,000.00
To record declaration of 50% dividend in common stock. 500 shares at $100.00 (par) = $50,000.00.		

At this point the stock dividend would appear upon the balance sheet as follows:

Net Worth:		
Common Stock, $100.00 par	$100,000.00	
Dividend Payable, 50%, in Common Stock	50,000.00	
Retained Income	70,000.00	$220,000.00

When the dividend is paid, the entry is

Dividend Payable in Common Stock . . .	50,000.00	
Common Stock		50,000.00
To record payment of 50% stock dividend.		

A stockholder who owned 100 shares of stock would receive a stock certificate for an additional 50 shares of common stock as his dividend. The dividend, however, does *not* change his proportion of ownership. Before the

dividend the shareholder owned 100/1000 of the company; after the dividend, the shareholder owned 150/1500 of the company. In both cases his proportion of ownership is 10%.

If the company maintains the same annual dividend rate, say 10%, it will disburse $15,000.00 in dividends as compared with $10,000.00 disbursed previously.

A dividend payable in common stock may be declared by a corporation whose capitalization consists of both preferred and common stock. Under such circumstances the stock dividend is usually paid to the holders of the common stock, the dividend requirements of the preferred stock having been previously satisfied through the declaration of cash dividends.

Although corporate history contains examples of a stock dividend on common stock being paid in certificates of preferred stock, the general practice today is to pay the dividend in certificates of common stock. The common stock is to be used as the dividend is taken from the unissued or treasury stock (defined on page 399) of a corporation. This must be so because, after the dividend has been paid, the total of a company's outstanding common stock must not exceed the amount of capital stock which the corporation has been authorized to issue by its charter.

In general it may be said that the right of preferred stock to participate in stock dividends is no different from its right to participate in cash dividends.[6] In Virginia, however, it has been held that

> . . . when there are two kinds of stockholders, one preferred and the other common, when there is no difference in their status under the corporate charter except a preference as to dividends, and none under the statute law, the sale of stock to common stockholders at par, without giving the preferred stockholders an opportunity to purchase their proportionate part under the same conditions, or the issuance of a stock dividend to the common stockholders to the exclusion of the preferred stockholders, is an impairment of the rights of the latter which entitles them to relief in equity if the stock has not been delivered, or to damages for breach of a contract obligation if it has.[7]

The Virginia rule is also the rule in Pennsylvania.[8]

DIVIDENDS IN NO-PAR STOCK The declaration of a dividend payable in no-par value capital stock raises the question of what amount should be transferred from Retained Income (or Earned Surplus) to Common Stock. The board of directors, in its dividend declaration, should fix this amount by stating the number of shares represented by the stock dividend and the

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[6] *Tennant* v. *Epstein*, 356 Ill. 26.

Niles v. *Ludlow Valve Mfg. Co.*, 202 Fed. 141 (1913); writ of certiorari denied, 231 U. S. 748 (1913).

[7] *Riverside & Dan River Cotton Mills* v. *Thomas Branch & Company*, 137 S.E. 620, 52 A.L.R. 213 (1917).

[8] *Stirling* v. *H. F. Watson Co.*, 241 Pa. 105.

book value to be transferred from Retained Income (or Earned Surplus) to Common Stock.

If the directors specify the number of shares represented by the dividend but fail to indicate the amount to be transferred to Common Stock, one of the following procedures may be used:

1. With respect to stock dividends generally, state laws require the capitalization of the par value of the dividend shares or the stated value of the no-par shares. By this legal requirement, the minimum amount of a dividend payable in no-par stock would be determined thus: Number of dividend shares times the "stated value" of each no-par share.

Example 1

The X Corporation has

Common Stock, no-par (stated value, $20.00 per share), 10,000 shares	$233,112.00
Retained Income	106,834.00

Directors declare a dividend payable in 1,000 shares of no-par common stock. The dividend entry would be

Retained Income	20,000.00	
Dividend Payable in Common Stock		20,000.00
To record declaration of dividend of 10% payable in 1,000 shares of no-par value stock, stated value $20.00. 1,000 × $20.00 = $20,000.00.		

This accounting is similar to that used for the recording of a dividend payable in par value stock, stated value being used in place of par value.

2. The amount of retained income (or earned surplus) to be capitalized may be an amount larger than the stated value per no-par share. The dividend amount might be determined as follows:

$$\text{Number of dividend shares} \times \begin{cases} \text{Average amount of capital} \\ \text{paid in per share on issued} \\ \text{shares of the corporation.} \end{cases}$$

Example 2

The Y Corporation has

Common Stock, no-par (stated value, $20.00 per share), 10,000 shares	$233,112.00
Retained Income	106,834.00

Directors of the corporation declare a dividend payable in 1,000 shares of no-par common stock. The dividend entry would be

Retained Income	23,311.20	
Dividend Payable in Common Stock		23,311.20
To record declaration of dividend of 10% payable in 1,000 shares of no-par stock, stated value $20.00. 1,000 × $23.3112 = $23,311.20.		

The value of $23.3112 represents the average amount of capital paid in per issued share, i.e., $233,112.00 ÷ 10,000 = $23.3112.

Example 3

The Z Corporation has

Common Stock, no-par (stated value, $20.00 per share), 10,000 shares	$200,000.00
Paid-in Surplus	33,112.00
Retained Income	106,834.00
Treasury Stock, common, 100 shares, at cost	3,720.00

Directors declare a dividend payable in 1,000 shares of no-par common stock. The dividend entry would be

Retained Income	23,311.20	
Dividend Payable in Common Stock		23,311.20
To record declaration of dividend of 10% payable in 1,000 shares of no-par stock, stated value $20.00. 1,000 × $23.3112 = $23,311.20.		

The value of $23.3112 again represents the average amount of capital paid in per issued share, i.e.,

$$(\$200,000.00 + \$33,112.00) \div 10,000 = \$23.3112.$$

Treasury Stock: Introductory Comments

Capital stock, once issued and fully paid for (shares of par value must have been fully paid for at a price at least equal to par), and later reacquired by the issuing corporation is called "treasury stock." Although it is physically in the possession of the corporation, treasury stock is issued stock and legally outstanding. Treasury stock may be carried in the treasury of a corporation indefinitely or, if desired, it may be sold or issued for legitimate corporate purposes. If treasury stock is sold, no liability attaches to the purchaser of the stock regardless of the price of resale. Treasury stock, like unissued stock, does not possess dividend or voting rights or pre-emptive rights to subscribe to new issues of capital stock; and it has no rights to assets in the event of corporate dissolution.

Because of its special nature, treasury stock should be recorded in a Treasury Stock account, an account which, from an accounting point of view, is a debit subdivision of the Capital Stock account. The Capital Stock account of a corporation has the function of reflecting the amount of capital stock which has been issued; and the Treasury Stock account has the function of reflecting the amount of its own fully paid capital stock acquired by this corporation, the issuing corporation. Treasury stock of both par value and no-par value is generally recorded at its cost of acquisition.

It follows, then, that the number of shares of capital stock outstanding at any given date is obtained by deducting the number of shares in the

Treasury Stock account from the number of shares in the Capital Stock account.

As a general rule, treasury stock is legally looked upon as not retired but as a reduction of the amount of surplus available for dividends. However, if a corporation acquires some of its own capital stock for the purpose of formally and permanently retiring these shares, the act of cancellation should be reflected by an appropriate debit to the Capital Stock account.

It may be observed, in passing, that it would be possible for a corporation to acquire some of its own stock—stock of par value, not fully paid. Theoretically, this stock should be debited to Reacquired Stock rather than to Treasury Stock in order to distinguish between stock which carries a discount liability to the purchaser and stock which does not. In practice, however, this distinction is not observed, all reacquired stock being placed in the Treasury Stock account.

Accounting Entries for Treasury Stock

Statutes of the various states strongly tend to limit the disbursement of corporate funds for the purchase of treasury stock to an amount equal to the balance of the Retained Income (or Earned Surplus) account of a corporation. When a purchase of treasury stock occurs, the result of the purchase is to reduce cash and proprietorship; and the effect of the reduction in proprietorship is to reduce the amount of retained income available for dividends. At any given date, accordingly, the amount of retained income available for dividends is the excess of Retained Income (or Earned Surplus) over the cost of treasury stock. This restriction on the amount of retained income available for dividends is removed when the treasury stock is sold.

What is the purpose of these statutes? Basically, they rest upon the reasoning that, since the stockholders of a company cannot be held liable for the debts of a corporation, it is only fair for creditors of the corporation to have some assurance that the net worth (i.e., net assets) of the corporation will be maintained at a level at least equal to a stipulated amount defined as "stated capital" or as "legal capital." In general terms this amount may be looked upon as a value equal to the par value of all *issued* capital stock; or, in the case of no-par *issued* capital stock, the value or consideration received in excess of the credit to paid-in surplus.[9] Treasury stock is here interpreted as being a part of issued capital stock. There is considerable variance in the definitions of stated or legal capital among the several states. The net effect of these laws, however, is to protect creditors by statutory insistence on the retention, in a corporate business, of a mini-

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[9] Henry W. Ballantine, *Ballantine on Corporations* (Chicago: Callaghan & Company, 1946), pp. 478–479.

mum amount of capital (i.e., net assets) for the payment of corporate liabilities. This is done by placing a legal limitation on the disbursements of a corporation for dividends and for the purchase of treasury stock.[10] For accounting purposes, the amount of this legal limitation, in any given case, should be based on the opinion of a company's attorney.

Accordingly, it is now general practice for *all* purchases of treasury stock to be recorded at cost of acquisition. A memorandum is also placed in the Treasury Stock account showing the number of shares acquired. Concurrently, the amount of Retained Income (or Earned Surplus) available for dividends is reduced by the cost of the treasury shares required (as illustrated on pages 403 and 423).

Example 1

On December 1, 1958, the Par Sales Company (from page 373) made a cash purchase of 100 shares of its own capital stock (par $100.00) at a price of 95. These shares were originally issued on June 1, 1958. On December 15, 1958, a cash sale of this stock was made at 100. The entries would be

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[10] Section 8 of the Florida corporation act of 1928 contains the provision that "no such corporation shall purchase its own shares of capital stock except from the surplus of its assets over its liabilities including capital."

Section 6 of the business corporation act of Illinois, passed in 1933, reads:

"A corporation shall have power to purchase, take, receive, or otherwise acquire, hold, own, pledge, transfer, or otherwise dispose of its own shares, provided that it shall not purchase, either directly or indirectly, its own shares when its net assets are less than the sum of its stated capital, its paid-in surplus, any surplus arising from unrealized appreciation in value or revaluation of its assets and any surplus arising from surrender to the corporation of any of its shares, or when by so doing its net assets would be reduced below such sum."

Louisiana, in Section 23 of its business corporation act of 1928, holds that "unless the articles otherwise provide, a corporation may purchase its own shares of any class issued by it, but only out of surplus available for dividends."

Under subdivision 7 of Section 30 of the annotated code of Maryland, 1924, it is provided that "no . . . corporation shall purchase any shares of its own stock unless the assets of the corporation remaining immediately after such purchase shall be not less than the debts of the corporation plus the amount of its issued capital stock."

The Michigan and Delaware corporation laws (Section 10-H and Section 19, respectively) provide that "no corporation shall use its funds or property for the purchase of its own shares of capital stock when such use would cause any impairment of the capital of the corporation." (These sections do not prevent a corporation from redeeming its preferred stock by purchase and charging same to Capital Stock and Surplus. See Section 37 for Michigan and Section 27 for Delaware.)

The New York penal code, Section 664, states:

"A director of a stock corporation, who concurs in any vote or act of the directors of such corporation, or any of them, by which it is intended: . . .

5. To apply any portion of the funds of such corporation, except surplus, directly or indirectly, to the purchase of shares of its own stock, is guilty of a misdemeanor."

Colorado, Delaware, Indiana, Michigan, Missouri, Nevada, Pennsylvania, Rhode Island, and West Virginia provide that the purchase of treasury stock must not impair the capital of a corporation. California, North Dakota, Ohio, and Oklahoma hold that treasury stock may be acquired only out of surplus.

Dec.	1	Treasury Stock	9,500.00	
		Cash		9,500.00
		To record purchase of 100 shares of treasury stock ($100.00 par) at 95.		
	15	Cash	10,000.00	
		Treasury Stock		9,500.00
		Paid-in Surplus		500.00
		To record sale of 100 shares of treasury stock at 100.		

Example 2

On November 10, 1958, the No-Par Sales Company (from page 391) made a cash purchase of 100 shares of its own capital stock (no-par) at a price of 25. These shares were originally issued on September 20, 1958. On November 29, 1958, a cash sale of this stock was made at 30. The entries would be

Nov.	10	Treasury Stock	2,500.00	
		Cash		2,500.00
		To record purchase of 100 shares of no-par treasury stock at 25.		
	29	Cash	3,000.00	
		Treasury Stock		2,500.00
		Paid-in Surplus		500.00
		To record sale of 100 shares of treasury stock at 30.		

When transactions in treasury stock involve entries in a surplus account, the surplus in question is Paid-in Surplus (or Capital Surplus).

No accounting gain or loss is involved in treasury stock transactions. This must be so in the light of accepted definitions of income, profit, asset, and retained income (or earned surplus). This is also true under the Internal Revenue Code of 1954 (Section 1032), the code recognizing that the sale of treasury stock by a corporation represents *only* a receipt of *capital* funds.

A corporation which purchases shares of its own stock for less than the sum for which it was issued and then retires the stock may have benefited by the transaction in a sense, but the real gain is by its remaining stockholders and not by the corporation as such. The change effected is merely a change in the capital structure.[11]

Where no Paid-in Surplus (or Capital Surplus) account exists, or where the balance in this account is not large enough to absorb fully debits arising from treasury stock transactions, it is expedient to debit the unabsorbed value to such other surplus as may be available. While this accounting is not sound in theory, it may have to be used where Paid-in Surplus (or Capital Surplus) is inadequate; where surplus information in the ledger is not divided between that which is earned and that which is paid in; or where the breakdown of an existing surplus account into types of surplus would not be worth the cost of the effort involved.

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[11] *Eisner* v. *Macomber*, 252 U. S. 189 (1920).

DEPARTURE FROM COST BASIS Although it is general practice for treasury stock to be recorded at its cost of acquisition, the American Accounting Association has recommended a departure from cost in the following opinion:

> An outlay by a corporation for shares of its own stock should be treated as a reduction of paid-in capital up to the pro rata amount represented by the acquired shares, whether or not such shares are reissuable. If the outlay for the reacquired shares exceeds the pro rata reduction in paid-in capital, the excess should be treated as a distribution of retained income. The reissue of acquired shares should be accounted for in the same manner as an original issue of corporate shares.[12]

Treasury Stock on the Balance Sheet

Because the purchase of treasury stock is the liquidation of a proprietary interest, the Treasury Stock account is a deduction in the net worth section of the corporate balance sheet. Concurrently, the restriction of Retained Income (or Earned Surplus) by an amount equal to the cost of treasury stock should be disclosed.

Example

Capital:				
Common Stock, $100.00 par value:				
Authorized	1,000	shares	$100,000.00	
Unissued	250	shares	25,000.00	
Issued	750	shares	$ 75,000.00	
Retained Income (of which $9,500.00 is restricted and unavailable for dividends; this amount is equal to cost of treasury stock purchased)			14,500.00	
			$ 89,500.00	
Less Treasury Stock, 100 shares at cost			9,500.00	$80,000.00

Two additional examples appear on page 423.

TREASURY STOCK IS NOT AN ASSET Treasury stock should never appear as an asset in the corporate balance sheet. It is not an asset even though cash or some other asset has been expended in its acquisition. The effect of an expenditure for treasury stock is not the acquisition of an asset but the payment of a proprietary ownership interest; it reduces corporate net worth. The nature of the transaction is not affected by management's intention to reissue or not to reissue the stock.

Treasury stock does not conform to the definition of an asset. It is merely one channel through which a corporation may acquire assets. Treasury stock is not capital in and of itself but, like unissued capital stock, may be used to obtain capital. That treasury stock is not an asset is

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[12] American Accounting Association, *Accounting Concepts and Standards Underlying Corporate Financial Statements* (1948).

convincingly proved by noting the fact that it never has any realizable value when a corporation is being liquidated.

The fundamental underlying the discussion of this section is this: The purchase of treasury stock represents a reduction in, and the sale and reissue of this stock represents an increase of, the proprietary interest of a corporation. Acquisition of treasury stock represents the *withdrawal* of capital by one proprietary interest; the sale and reissue of this stock represents *investment* of capital in the corporation by a new proprietary interest; these are two independent transactions, no matter how short may be the time between the dates of acquisition and reissue. *Acquisition of treasury stock is an independent transaction. Sale and reissue of treasury stock is another independent transaction.*

DONATED TREASURY STOCK A corporation may need working capital. Rather than invest additional funds themselves, stockholders may assist a corporation to raise working capital by donating some of their own fully paid capital stock to the corporation. The subsequent sale of this treasury stock—made without discount liability to the purchaser regardless of the price paid by him—supplies the corporation with funds.

Since it is general accounting practice for treasury stock, acquired by purchase, to be recorded at cost, it follows that treasury stock, acquired by donation, involves no cost and therefore involves no debit to the Treasury Stock account. However, a memorandum of the acquisition should be made in the Treasury Stock account to record the number of shares received, thus:

TREASURY STOCK

| 19— | | |

ber 1 were paid in full except for the amount due on 1,000 shares of stock; a 60-day extension was granted for the payment of this installment.

Organization expenses were paid, $5,000.00.

Required

1. Record these transactions in journal entry form. Post to appropriate T accounts.
2. Balance sheet, November 30, 19__. Disregard any profit or loss from operations.

Problem 19–2. The Summit Sales Company was organized with an authorized capital stock of 100,000 shares of no-par capital stock (stated value $10.00 per share). The following transactions then occurred:

May 1 Sold 1,000 shares at 20 for cash.

15 Received subscriptions to 10,000 shares at 20. A down payment of 50% was collected, the balance being due in 6 months.

25 Received subscriptions to 10,000 shares at 22. A down payment of 50% was collected, the balance being due in 6 months.

June 29 Received subscriptions to 14,000 shares at 25. A down payment of 50% was collected, the balance being due in 6 months.

Nov. 15 Collected the balance due on the subscriptions of May 15.

25 Collected the balance due on the subscriptions of May 25.

Dec. 29 Collected the balance due on 10,000 shares subscribed for on June 29. A 30-day extension was granted for payment of the balance due on the remaining 4,000 shares subscribed.

30 Two hundred shares of capital stock at 25 were issued in favor of five individuals in payment of costs which they incurred in the organization of the Summit Sales Company.

Required

1. Record these transactions in journal entry form. Post to appropriate T accounts.
2. Balance sheet, December 31, 19__. Disregard any profit or loss from operations.

Problem 19–3. The Kraft-Elton Corporation was organized with an authorized capital stock consisting of 6% preferred stock, 2,000 shares, $100.00 par; and common stock, 20,000 shares, no-par.

The following transactions then occurred:

1. Received subscriptions for 1,000 shares of preferred stock at 104. A down payment of 25% was collected on these subscriptions.
2. Sold 10,000 shares of common stock at 94 for cash.
3. Received subscriptions to 4,000 shares of common stock at 102.
4. Purchased 1,000 shares of treasury stock (common) at 98. These shares were originally issued in transaction #2.

5. The balance due on the subscriptions for preferred stock was collected.
6. Sold 500 shares of treasury stock at 100.

Required

Record the above transactions in journal entry form.

Problem 19–4. The Claire-Davis Corporation was organized on January 17, 19__, with an authorized capitalization of 10,000 shares 5% preferred stock, $100.00 par, and 30,000 shares common stock, $100.00 par. The following transactions then occurred, in order:

1. Sold 4,000 shares preferred stock at 102½ for cash.
2. Received subscriptions to 2,000 shares preferred stock at 105.
3. Sold 11,000 shares common stock at 100 for cash.
4. Received subscriptions to 10,000 shares common stock at 101.
5. All the subscriptions in transaction #2 were collected. Certificates of capital stock were issued.
6. Net income for 19__, $300,000.00 (earned in cash).
7. Collections were made on the subscriptions of transaction #4 amounting to $605,000.00. As a result of these collections, subscriptions for 5,000 shares of common stock were paid in full; certificates of capital stock were issued accordingly.
8. Acquired 1,000 shares of the company's own common stock by a cash payment of $100,000.00.
9. A dividend of 10%, payable in common stock, was declared

Required

1. Enter these transactions in appropriate T accounts.
2. Balance sheet, December 31, 19__.

Problem 19–5. The Mayflower Sales Company was organized on January 1, 19__, with an authorized capitalization of 100,000 shares of no-par common stock. Over the following two years the following transactions occurred:

1. Sold for cash, 10,000 shares at 11.
2. Sold for cash, 10,000 shares at 15.
3. Received subscriptions to capital stock, 10,000 shares at 17.
4. Collected these subscriptions in full, $170,000.00.
5. Received subscriptions to capital stock, 10,000 shares at 19.
6. Collections on these subscriptions, representing partial payments, were received, 10% or $19,000.00.
7. The balance due on these subscriptions was collected, 90% or $171,000.00.
8. Total net income for the two-year period amounted to $130,000.00 (earned in cash).

9. Declared and paid a cash dividend of $1.00 per share.
10. Declared and paid a dividend payable in capital stock, 5%.
11. Purchased 1,000 shares of treasury stock at 18.
12. A Reserve for Treasury Stock was created for the cost of treasury stock.
13. Purchased 1,000 shares of treasury stock at 19.
14. A Reserve for Treasury Stock was created for the cost of treasury stock.
15. Purchased 1,000 shares of treasury stock at 20.
16. A Reserve for Treasury Stock was created for the cost of treasury stock.
17. Sold 3,000 shares of treasury stock for cash, at a price of 21.

Required

1. Enter these transactions in appropriate T accounts.
2. Balance sheet, December 31, 19__, giving effect to these transactions.

Problem 19–6. The ABC Company has capital stock outstanding of

Preferred Stock, 6% cumulative, nonparticipating, par $100.00	$100,000.00
Common Stock, par $100.00	200,000.00

It is the policy of the ABC Company to declare cash dividends on December 31, only, at which date the results of the year are known. For the purpose of this problem, assume that the directors declare the maximum dividends payable on outstanding capital stock.

Required

1. What are the maximum dividends payable on each class of stock if retained income at the end of a given year is
   a) $15,000.00,
   b) $18,000.00,
   c) $22,000.00, or
   d) $4,000.00 at the end of the first year,
   $15,000.00 at the end of the second year, and
   $17,000.00 at the end of the third year?
2. What maximum dividends would be payable on both classes of capital stock if the preferred stock were (a) cumulative and participating (share for share)? (b) noncumulative?

Problem 19–7. No dividend has yet been paid in the calendar year 19__ by the Bishop Furniture Company, Inc., a retail furniture store selling largely on the installment plan of payment. The condensed balance sheet of the company, December 31, 19__, is

Assets		*Equities*	
Cash	$ 24,000.00	Accounts Payable	$ 40,000.00
Notes Receivable (average due date, June 30)	70,000.00	Income Taxes Payable	20,000.00
Accounts Receivable (average due date, April 1)	20,000.00	Total Liabilities	$ 60,000.00
Merchandise Inventory	50,000.00	Common Stock, $100.00 par	100,000.00
Miscellaneous Equipment	16,000.00	Earned Surplus	60,000.00
Building	35,000.00		
Land	5,000.00		
	$220,000.00		$220,000.00

Required

On the basis of this balance sheet, what dividend policy should be recommended to the directors of the Bishop Furniture Company?

Problem 19–8. Following is the preliminary condensed balance sheet of the Case Tool Company on December 31, 19__:

Assets		*Equities*	
Cash	$ 502,000.00	Accounts Payable	$ 150,000.00
Accounts Receivable	144,000.00	Income Taxes Payable	70,000.00
Inventories	669,000.00	Customers' Deposits on Orders	34,000.00
Plant and Equipment	631,000.00	6% Preferred Stock, $100.00 par	100,000.00
		Common Stock, $1.00 par	200,000.00
		Paid-in Surplus	336,000.00
		Retained Income	1,056,000.00
	$1,946,000.00		$1,946,000.00

This balance sheet did not include the following transactions:

Dec. 28 A quarterly dividend of 1½% was declared on the preferred stock. With this declaration, the 6% dividend for the year on the preferred stock declared in full to date.

29 A quarterly cash dividend of $0.50 was declared on the common stock.

30 A dividend payable in 100,000 shares of common stock was declared.

31 Sold 100,000 shares of common stock for cash at $15.00 per share.

These transactions were part of a general program to raise funds for needed capital expenditures, the business having operated at or near capacity for a number of years.

Required

Prepare a new balance sheet giving effect to these transactions.

Problem 19–9. The Knox-Eddy Corporation was organized on October 31, 19__, with an authorized capital stock consisting of 10,000 shares 7% preferred stock, $100.00 par, and 100,000 shares common stock, $20.00 par.

During November and December the following transactions occurred:

1. Sold 1,000 shares preferred stock at par for cash.
2. Sold 10,000 shares common stock at par for cash.
3. Sold 1,000 shares preferred stock at a price of 104 for cash.
4. Sold 15,000 shares common stock at a price of 22 for cash.
5. Received subscriptions for 1,000 shares preferred stock at 110.
6. Received subscriptions for 10,000 shares common stock at 25.
7. Assets of the Sparks Equipment Company are purchased: land, $50,000.00, building, $250,000.00, fixtures and equipment, $60,000.00, inventory, $140,000.00. These assets were paid for by the issuance of 5,000 shares of preferred stock.
8. A 60% cash collection was made on all of the shares subscribed for in transaction #5.
9. All of the subscriptions in transaction #6 were collected.
10. A stockholder, who obtained his stock in transaction #4, is urgently in need of funds. The corporation acquires from him for cash 1,000 shares of common stock at a price of 20.
11. A 40% cash collection is made on subscriptions covering 900 shares of preferred stock (originally subscribed for in transaction #5).
12. Checks totaling $5,000.00 are given to five individuals in payment of costs which they incurred in the organization of the Knox-Eddy Corporation.

Required

1. Record the above transactions in appropriate T accounts.
2. Balance sheet, December 31, 19__. The assets need not be classified. The net worth section, however, should be presented in detail.

Problem 19–10. The balance sheet of the Dale Corporation on December 31, 19__, was

Dale Corporation

BALANCE SHEET, DECEMBER 31, 19__

Assets

Cash	$ 35,000.00
Accounts Receivable $95,000.00 (Allowance for Bad Debts, $5,000.00)	90,000.00
Merchandise Inventory	120,000.00
Prepaid Expenses	5,000.00
Office Machines and Equipment $60,000.00 (Allowance for Depreciation, $10,000)	50,000.00
	$300,000.00

Liabilities and Net Worth

Accounts Payable	$ 20,000.00
7% Preferred Stock, $100.00 par (Authorized, $200,000.00)	100,000.00
Common Stock, $100.00 par (Authorized, $300,000.00)	100,000.00
Retained Income	50,000.00
Paid-in Surplus	30,000.00
	$300,000.00

During the next calendar year the following transactions occurred in this order:

1. 250 shares of preferred stock were subscribed for at 110. Collections of $17,500.00 were made on these subscriptions. Of these collections 100 shares were paid in full. The balances due on stock subscriptions were considered good.
2. 50 shares of Dale Corporation common stock were received at par in payment of an accounts receivable against which the Allowance for Bad Debts had been established.
3. Sale of merchandise on account, $300,000.00.
4. Purchase of merchandise on account, $250,000.00.
5. Collections on accounts receivable, $290,000.00.
6. Paid accounts payable, $200,000.00.
7. Paid operating expenses, $60,000.00.
8. Depreciation expense for the year was $5,000.00; bad debts expense, $2,000.00.
9. At the end of the year the amount of unused operating expenses was $12,000.00.
10. A cash dividend of 7% was declared and paid on the preferred stock.
11. A stock dividend of 20% was declared and paid on the common stock out of retained income.
12. A cash dividend of 5% was declared on the common stock. This dividend was payable in the next accounting period.
13. Income taxes for the year were estimated at $15,000.00.

Required

1. Record the values of the beginning balance sheet and the year's transactions in appropriate T accounts.
2. Statement of income for the year ended December 31, 19__. Inventory, December 31, 19__, $160,000.00.
3. Balance sheet, December 31, 19__.
4. Statement of retained income for the year ended December 31, 19__.

Problem 19–11. On December 31, 19__, the balance sheet of The Clark Corporation was

Cash	$ 66,000.00	
Accounts Receivable	194,000.00	
Allowance for Bad Debts		$ 10,000.00
Merchandise Inventory	240,000.00	
Prepaid Expenses	10,000.00	
Office Machines and Equipment	120,000.00	
Allowance for Depreciation		20,000.00
Accounts Payable		40,000.00
7% Preferred Stock, $100.00 par (Authorized, $300,000.00)		200,000.00
Common Stock, no-par 2,000 shares		240,000.00
Paid-in Surplus		20,000.00
Retained Income		100,000.00
	$630,000.00	$630,000.00

During the next calendar year the following transactions occurred:

1. 500 shares of preferred stock were subscribed for at 110. Collections of $35,000.00 were made on these subscriptions. Of these collections 100 shares were paid in full. The balances due on stock subscriptions were considered good.
2. 100 shares of Clark Corporation common stock were received at 100 in payment of an accounts receivable against which the Allowance for Bad Debts of $10,000.00 had been established.
3. Sale of merchandise on account, $600,000.00.
4. Purchase of merchandise on account, $500,000.00.
5. Collections on accounts receivable, $580,000.00.
6. Paid accounts payable, $400,000.00.
7. Paid operating expenses, $120,000.00.
8. Depreciation expense for the year was $10,000.00; and $4,000.00 of the new accounts receivable were estimated uncollectible.
9. 250 shares of Clark Corporation common stock were purchased for $22,500.00. Two days later, 50 of these shares were sold for cash at a price of $100.00 per share.
10. A stock dividend of 20% was declared and paid on the common stock. The payment was made October 31.
11. A cash dividend of 7% was declared and paid on the preferred stock.
12. A cash dividend of $5.00 per share was declared on the common stock on December 31, 19__, payable the following January 10.
13. The provision for income taxes for the year was $30,000.00.

Required

1. Record the values of the beginning balance sheet and the year's transactions in appropriate T accounts.
2. Statement of income for the year ended December 31, 19__. Inventories, December 31, 19__, were merchandise, $320,000.00; prepaid expenses, $24,000.00.
3. Balance sheet, December 31, 19__.

Problem 19–12. On December 31, 1957, the after-closing trial balance of Collins & Co., Inc., was

Cash	$ 18,000.00	
Accounts Receivable	75,000.00	
Allowance for Bad Debts		$ 5,000.00
Merchandise Inventory	81,000.00	
Fixed Assets	70,000.00	
Allowance for Depreciation		7,000.00
Accounts Payable		48,000.00
Common Stock		100,000.00
Preferred Stock		50,000.00
Retained Income		34,000.00
	$244,000.00	$244,000.00

The authorized capital stock of the corporation was 7% preferred stock, $100,000.00, and common stock, $200,000.00, all stock being of $100.00 par value.

As of January 2, 1958, the assets and liabilities of the partnership of Dow & Smith were purchased by issuing common stock for the net assets acquired. The purchase was made at proper values:

		Per Dow & Smith Books	*Fair Appraised Value*
Cash		$ 2,000.00	$ 2,000.00
Accounts Receivable		18,000.00	17,000.00
Merchandise Inventory		15,000.00	20,000.00
Fixed Assets		20,000.00	20,000.00
		$55,000.00	
Accounts Payable		$12,000.00	12,000.00
	P & L Ratio		
S. A. Dow, Capital	60%	25,000.00	
C. M. Smith, Capital	40	18,000.00	
		$55,000.00	

During 1958 the following transactions also occurred:

1. Preferred stock of $50,000.00 par value was sold at 100, and cash of $40,000.00 was collected in part payment of these subscriptions. The balance due on these subscriptions, $10,000.00, was considered collectible.
2. The corporation purchased 270 shares of its own common stock on the open market at a total cost of $22,000.00 cash.
3. Sales on account, $200,000.00.
4. Collections on accounts receivable, $225,000.00.
5. Purchases of merchandise on account, $150,000.00.
6. Paid accounts payable, $180,000.00.
7. Expenses paid, $45,000.00; expenses incurred but not paid, $5,000.00.
8. Estimated depreciation expense, $9,000.00.
9. Worthless accounts receivable, not written off by December 31, 1958, amounted to $4,000.00. Bad debts expense for the year was estimated at $3,000.00.
10. Provision for income taxes, $8,000.00.
11. A cash dividend of 7% was declared and paid on the preferred stock.
12. A cash dividend of 3% was declared on the common stock. This dividend was payable January 10, 1959.

Required

1. Record the values of the balance sheet, December 31, 1957, and the transactions of 1958, in appropriate T accounts.

2. Statement of income for the year ended December 31, 1958. Inventory, December 31, 1958, $131,000.00.

3. Balance sheet, December 31, 1958.

4. Statement of retained income for the year ended December 31, 1958.

Chapter 20 SURPLUS / RESERVES / RELATED FUNDS

Definition of Surplus

Broadly speaking, surplus is the excess of the net worth of a corporation over the sum of the balances of its capital stock accounts. In a more specific sense, realized surplus is of two kinds:

	Alternative Older Titles
1. Paid-in surplus	Capital surplus
2. Retained income	Earned surplus

Paid-in surplus is capital contributed by stockholders in excess of the values credited to capital stock accounts. Paid-in surplus is credited only for bona fide contributions to the invested capital of a corporation; it is debited only for authorized disbursements of invested capital. These credits and debits to Paid-in Surplus are only for those values not properly recorded in accounts with capital stock.

Retained income (or earned surplus) is all realized surplus other than paid-in surplus. From another point of view, retained income is that amount of cumulative net income earned over the corporate life of a business which has not been capitalized, consumed by losses, or distributed as cash or property dividends.

Retained Income is credited with the net income of each accounting period. This income includes

1. compensation earned for the furnishing of capital or services (less costs incurred in the earning of this compensation), and
2. realized incomes of *any* kind. Generally, these incomes will have been realized by the concurrent exchange of assets or services for considerations whose fair market value is more than the net book cost, if any, of the assets or services surrendered.

Retained Income is debited with the net loss of each accounting period. This loss includes

1. costs in excess of the compensation received for the furnishing of capital or services,

2. net book costs in excess of the fair market value of the considerations received in the concurrent exchange of assets, and
3. realized losses of *any* kind.

Retained Income is also debited with disbursements of earned income (i.e., dividends) and with values transferred to accounts with capital stock.

In a broad sense, Retained Income receives all debits and credits to realized surplus other than those involving changes in paid-in capital.

At the end of a corporate accounting period, the balance of the Profit and Loss account is closed in the following manner:

Profit and Loss	xxx xx	
Retained Income (or Earned Surplus)		xxx xx
To transfer net income for the year ended December 31, 19__, to the Retained Income account.		

Other Definitions of Surplus

The following definitions have been advanced by the American Institute of Certified Public Accountants and the American Accounting Association.

Paid-in surplus

Capital contributed for, or assigned to, shares in excess of par or stated value . . . or of transactions by the corporation in its own shares; and capital received other than for shares, whether from shareholders or from others.[1]

Paid-in capital is measured by the cash, or the fair market value of other assets or services, contributed by stockholders or by persons acting in a capacity other than that of stockholders or creditors, or by the amount of liabilities discharged upon the transfer of an equity from a creditor to a stockholder status. Paid-in capital may be reduced by the redemption or other reduction of outstanding shares, payments of liquidating dividends, or adjustments effected by a corporate reorganization. The reduction of paid-in capital upon the contraction of outstanding shares may not exceed the prorata portion of paid-in capital applicable to the number of shares contracted.[2]

Retained income or Earned surplus

The term means the balance of net profits, income, gains and losses of a corporation from the date of incorporation (or from the latest date when a deficit was eliminated in a quasi-reorganization) after deducting distributions therefrom to shareholders and transfers therefrom to capital stock or capital surplus accounts.[3]

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[1] American Institute of Certified Public Accountants, *Accounting Terminology Bulletin No. 1* (New York: 1953), p. 30.

[2] American Accounting Association, *Accounting Concepts and Standards Underlying Corporate Financial Statements* (1948). *Note:* The American Accounting Association defines paid-in capital rather than paid-in surplus.

[3] American Institute of Certified Public Accountants, *Accounting Terminology Bulletin No. 1* (New York: 1953), p. 16.

Retained income is the amount of income since the formation or a reorganization of the enterprise less the amount distributed to stockholders. Distributions include dividends and the excess of the amount of assets disbursed in the reacquisition of shares of capital stock over the prorata portion of paid-in capital applicable to such shares. The distinction between paid-in capital and retained income should be permanent. Where retained income has been designated as paid-in capital by means of stock dividends, recapitalizations, or by other customary corporate action the amount so designated should be indicated in the balance sheet.[4]

Recommended Discontinuance of the Term "Surplus" by the American Institute of Certified Public Accountants

The Committee on Terminology of the American Institute of Certified Public Accountants has stated:

67. While the terms *capital surplus* and *earned surplus* have been widely used, they are open to serious objection:

(1) The term *surplus* has a connotation of excess, overplus, residue, or "that which remains when use or need is satisfied" (Webster), whereas no such meaning is intended where the term is used in accounting.

(2) The terms *capital* and *surplus* have established meanings in other fields, such as economics and law, which are not in accordance with the concepts the accountant seeks to express in using those terms.

(3) The use of the term *capital surplus* (or *paid-in surplus*) gives rise to confusion. If the word *surplus* is intended to indicate capital accumulated by the retention of earnings, i.e., retained income, it is not properly used in the term *capital surplus;* and if it is intended to indicate a portion of the capital, there is an element of redundancy in the term *capital surplus.*

(4) If the term *capital stock* (and in some states the term *capital surplus*) be used to indicate capital which, in the legal sense, is restricted as to withdrawal, there is an implication in the terms *surplus* or *earned surplus* of availability for dividends. This is unfortunate because the status of corporate assets may well be such that they are not, as a practical matter, or as a matter of prudent management, available for dividends.

68. In seeking terms more nearly connotative of the ideas sought to be expressed, consideration should be given primarily to the *sources* from which the proprietary capital was derived. . . .

69. In view of the foregoing, the committee recommends that, in the balance-sheet presentation of stockholders' equity:

(1) The use of the term *surplus* . . . be discontinued.

(2) The contributed portion of proprietary capital be shown as:

(a) Capital contributed for, or assigned to, shares, to the extent of the par or stated value of each class of shares presently outstanding.

(b-i) Capital contributed for, or assigned to, shares in excess of such par or stated value (whether as a result of original issue of shares at amounts in excess

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[4] American Accounting Association, *Accounting Concepts and Standards Underlying Corporate Financial Statements* (1948).

of their then par or stated value, or of a reduction in par or stated value of shares after issuance, or of transactions by the corporation in its own shares); and

(b-ii) Capital received other than for shares, whether from shareholders or from others.

(3) The term *earned surplus* be replaced by terms which will indicate source, such as *retained income, retained earnings, accumulated earnings,* or *earnings retained for use in the business.* In the case of a deficit, the amount should be shown as a deduction from contributed capital with appropriate description.

(4) In connection with 2 (b) and 3 there should, so far as practicable, be an indication of the extent to which the amounts have been appropriated or are restricted as to withdrawal. . . .[5]

The Institute's committee, unfortunately, offered no substitutes for the terms "paid-in surplus," "capital surplus," and "earned deficit," omissions somewhat tending to reduce the effectiveness of the recommendations advanced. Nevertheless, an increasing and significant number of corporate balance sheets disclose discontinuance of the term "surplus."[6] The Texas Company, as a conspicuous example, has replaced the term "earned surplus" with "undistributed earnings employed in the business."

The terms "earned surplus" and "capital surplus" have enjoyed long use by accountants and businessmen and, for this reason, the terms should be understood. Whether or not—and how soon—the recommendations of the American Institute of Certified Public Accountants will win general acceptance and supersede terms of established usage is a matter which only the future can disclose. The trend in favor of the new terms is unmistakable, however.

Earned Deficit

Corporations may incur losses as well as realize incomes. If losses should become large enough, it would be possible for these losses—in the aggregate—to wipe out the undistributed accumulated earnings of a business and to create a debit balance in the Retained Income (or Earned Surplus) account. A debit balance in this account would mean that an impairment of the *invested capital* of the corporation has occurred.

This debit balance should be transferred to an account called Earned Deficit. Not only would this action result in a proper description of the debit value in question; it would also tend to avoid the possible misinterpretation which uninformed readers might draw from a debit balance in Retained Income (or Earned Surplus), especially if this account were improperly placed on the asset side of the balance sheet.

It is never proper accounting to capitalize an expenditure for the purpose of avoiding a debit balance in the Retained Income (or Earned Surplus) account.

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[5] *Accounting Terminology Bulletin No. 1,* pp. 29–31.

[6] American Institute of Certified Public Accountants, *Accounting Trends & Techniques in Published Corporate Annual Reports* (New York: published annually).

Debits and Credits to the Retained Income (or Earned Surplus) Account

Modern accounting thought and practice today exhibits a strong tendency to place *all* of the gains and losses of an accounting period in the statement of income for that period, with all so-called extraneous or extraordinary values properly described and segregated. In this way the "net income" of a business is all-inclusive because it includes all the incomes, costs, expenses, and losses of the accounting period. It is a statement of income in which net income, understandably, is "net income after everything." This type of statement—the "all-inclusive" statement of income—has been used generally in this book. It is illustrated in some detail on pages 200 and 593 of this book.

Under this concept of net income, it follows that the *only* entries to be placed in the Retained Income (or Earned Surplus) account of a corporation will be those for the recording of the net income or net loss of an accounting period, dividends, and certain transactions affecting certain retained income "reserve" accounts. A surplus account handled in this manner is called a "clean surplus" account.

From this it follows, also, that the *only* information to be placed in the statement of retained income (or earned surplus) for an accounting period is the information contained in the corporate Retained Income (or Earned Surplus) account for the same period.

Statement of Retained Income (or Earned Surplus)

The function of the statement of retained income (or earned surplus) of a corporation for an accounting period is somewhat the same as the statement of capital for a proprietorship or partnership. For a corporation, the statement of retained income (or earned surplus) is important because it explains those changes in net worth *not* explained by the statement of income, by purchases and sales of capital stock, or by changes in paid-in surplus.

When the statement of income is truly comprehensive in nature, i.e., when it includes *all* the gains and losses of an accounting period, the result is to reduce greatly the importance of the statement of retained income (or earned surplus). Aside from beginning and ending balances, the only values appearing in this statement—and the only entries appearing in the account—would be those for

the net income (or net loss) of an accounting period,
dividends declared out of income, and
transfers to or from retained income (or earned surplus) reserve accounts.

A statement prepared under this philosophy of accounting is one prepared under the theory of a "clean surplus."

The following example is an illustration of a "clean surplus" statement:

Example

Chester Sales Company

STATEMENT OF RETAINED INCOME
FOR THE YEAR ENDED DECEMBER 31, 1958

Balance, December 31, 1957		$ 900,000.00
Net income for the year 1958		300,000.00
		$1,200,000.00
Dividends paid:		
Preferred stock, $4.00 per share	$ 20,000.00	
Common stock, $6.00 per share	180,000.00	200,000.00
Balance, December 31, 1958		$1,000,000.00

Statements of "clean surplus" have been increasingly and significantly used in recent years. Users of these statements now include such well-known companies as the Standard Oil Company of New Jersey, the Dow Chemical Company, Montgomery Ward & Co., Armco Steel Corporation, The American Sugar Refining Company, and the General Motors Corporation.

If a corporation has more than one surplus account, the statement of surplus should include all of them.

Example

Chester Sales Company

STATEMENT OF RETAINED INCOME AND PAID-IN SURPLUS
FOR THE YEAR ENDED DECEMBER 31, 1958

	Retained Income	*Paid-in Surplus*
Balance, December 31, 1957	$ 900,000.00	$100,000.00
Net income for 1958	300,000.00	
	$1,200,000.00	
Dividends paid:		
Preferred stock, $4.00 per share	$ 20,000.00	
Common stock, $6.00 per share	180,000.00	
	$ 200,000.00	
Premium realized on sale of 5,000 shares of preferred stock, $100.00 par, at 105		25,000.00
Balance, December 31, 1958	$1,000,000.00	$125,000.00

In contrast to the theory of a "clean" surplus statement is the older form, containing so-called "unusual" items of profit or loss. These unusual values, of course, are omitted from the statement of income.

Example

Illinois Sales Company

STATEMENT OF EARNED SURPLUS
FOR THE YEAR ENDED DECEMBER 31, 1958

Balance, December 31, 1957		$2,000,000.00
Net income for 1958		400,000.00
		$2,400,000.00
Dividends paid:		
Common stock, $7.00 per share		350,000.00
		$2,050,000.00
Less		
Loss from fire and explosion	$260,000.00	
Payment of additional income taxes for 1956, not previously provided for	150,000.00	410,000.00
Balance, December 31, 1958		$1,640,000.00

The Committee on Accounting Procedure of the American Institute of Certified Public Accountants believes that it is proper, under certain conditions, for some items to be excluded from the statement of income and placed in the statement of surplus. It says that

only extraordinary items such as the following may be excluded from the determination of net income for the year, and they should be excluded when their inclusion would impair the significance of net income so that misleading inferences might be drawn therefrom:

(a) Material charges or credits specifically related to operations of prior years, such as the elimination of unused reserves provided in prior years and adjustments of income taxes for prior years;

(b) Material charges or credits resulting from unusual sales of assets not acquired for resale and not of the type in which the company generally deals;

(c) Material losses of a type not usually insured against, such as those resulting from wars, riots, earthquakes, and similar calamities or catastrophes except where such losses are a recurrent hazard of the business;

(d) The write-off of a material amount of intangibles;

(e) The write-off of material amounts of unamortized bond discount or premium and bond issue expenses at the time of the retirement or refunding of the debt before maturity.[7]

Combined Statement of Income and Retained Income (or Earned Surplus)

Sometimes the statement of income is combined with the statement of retained income as illustrated below and in Chapter 28:

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[7] American Institute of Certified Public Accountants, *Accounting Research Bulletin No. 43* (New York: 1953), p. 63.

Example

Chester Sales Company

STATEMENT OF INCOME AND RETAINED INCOME
FOR THE YEAR ENDED DECEMBER 31, 1958

Sales		$2,800,000.00
Cost of Sales		2,000,000.00
Gross Profit		$ 800,000.00
Selling and General Expenses		420,000.00
Net Profit from Operations		$ 380,000.00
Less Additional Income Taxes, 1955		80,000.00
Net Income		$ 300,000.00
Retained Income, December 31, 1957		900,000.00
		$1,200,000.00
Dividends paid:		
Preferred stock, $4.00 per share	$ 20,000.00	
Common stock, $6.00 per share	180,000.00	200,000.00
Retained Income, December 31, 1958		$1,000,000.00

The advantage of this style of statement is that the whole story or history of the accounting year is carried in *one* statement, not two.

Surplus and Surplus Reserves

Surplus is generally divided into accounts with Retained Income and Paid-In Surplus, as described and defined on pages 413 ff.

Surplus accounts often appear under other names, especially with respect to retained income (or earned surplus) which is not available for cash dividends. Surplus accounts of this nature are often found under such titles as

Reserve for Contingencies
Reserve for Undivided Profits
Reserve for Plant Expansion
Reserve for Pending Litigation
Reserve for Sinking Fund
Reserve for Treasury Stock
Reserve for Retirement of Preferred Stock

These "reserve" accounts are appropriations of surplus—special reservations of net worth—created by entries such as the following:

Retained Income (or Earned Surplus)	xxx xx	
Reserve for Contingencies		xxx xx
To appropriate surplus for general corporate purposes, per minute book, December 31, 19__.		
Retained Income (or Earned Surplus)	xxx xx	
Reserve for Treasury Stock		xxx xx
To restrict surplus for an amount equal to cost of treasury stock purchased.		

In the books of many businesses, unfortunately, many accounts which are *not* surplus accounts are used with titles which include the word "reserve." In practice, then, a reserve account may be one of the following:

1. A surplus account. *Example:* Reserve for Contingencies.
2. A liability account. *Example:* Reserve for Income Taxes Payable.
3. A valuation account, i.e., an account used to arrive at the net accounting value of an asset or a liability. *Examples:* Reserve for Bad Debts, Reserve for Depreciation.

It is therefore incumbent upon the reader of a balance sheet to interpret accounts carefully in order to distinguish between those accounts which are surplus and those which are not. This is important because the net worth of a corporation may often be found to consist not only of conventional accounts for capital stock and surplus but also of other "reserve" accounts which are surplus but are not identified as such.

It is unquestionably true that "the term *reserve* is being used in accounting in a variety of different and somewhat conflicting senses. As a result clarity of thought and accuracy of expression are impaired and an adequate understanding of financial statements on the part of users is made more difficult than necessary."[8]

In view of the confusion in the use of the word "reserve," the Committee on Terminology of the American Institute of Certified Public Accountants has recommended that the term "reserve" be limited "to indicate that an undivided portion of the assets is being held or retained for general or specific purposes, and that the use of the term in the income statement or in the balance sheet (to describe deductions from assets or provisions for particular liabilities) should be avoided."[9]

The American Accounting Association does not believe that the term "reserve" should be used at all.

It has been recommended that the word "reserve" be restricted to captions describing appropriated retained income. While it would be an improvement in accounting terminology if the term were thus confined to items includible in the stockholders' equity, this would leave unresolved the conflict between the general and the accounting connotations of the word. The committee believes, therefore, that the popular understanding of financial statements, and the thinking of the profession, would be promoted by abandoning the term . . . . In accounting as elsewhere traditional terminology is not immutable.[10]

Appropriated Surplus and Matching Funds

An appropriation of Retained Income (or Earned Surplus) does not mean that specific assets have been set aside. Management, however, could

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[8] *Accounting Terminology Bulletin No. 1*, p. 26.
[9] *Ibid.*, p. 27.
[10] American Accounting Association, *Accounting Concepts and Standards Underlying Corporate Financial Statements* (1948).

set aside specific assets whose accounting values partially or fully match appropriations of undistributed earned income. For example, management could establish a fund whose amount would be equal to the amount of appropriated retained income (or earned surplus). It is important to observe that an *appropriation* of retained income or earned surplus continues to be *surplus*, whereas funds related to this appropriation of surplus are *assets*.

Thus a recent balance sheet of the American Bank Note Company showed, on the asset side,

Investments of Appropriation for Employees' Pensions:	
Securities	$1,526,495.00
Cash	23,700.00
	$1,550,195.00

and, on the equity side, as part of corporate net worth,

Appropriation for Employees' Pensions	$1,550,195.00

A recent balance sheet of the United Fruit Company showed, on the asset side,

Insurance Fund:	
United States Government Securities	$5,000,000.00

and, on the equity side, as part of "earnings retained in the business,"

Appropriated for Self-Insurance	$5,000,000.00

A recent year-end balance sheet of the American Sugar Refining Company showed a pension *fund* of $10,486,723.00 and, on the equity side, a matching pension fund *reserve* of similar amount.

The International Nickel Company, in one of its balance sheets, showed

Assets Held For	
Future Income Taxes	$10,250,000.00
Retirement System Reserve	5,304,557.00
	$15,554,557.00
Reserves For	
Future Income Taxes	$10,250,000.00
Retirement System	5,304,557.00
	$15,554,557.00

In this case the assets held were government securities valued at cost or below.

Capital Stock and Surplus on the Balance Sheet

The several elements comprising the net worth of a corporation may be presented on the balance sheet as shown by the following two examples

The second example reflects the recommendations of the American Institute of Certified Public Accountants in its *Accounting Terminology Bulletin No. 1* (1953).

Example 1

Net Worth:		
Preferred Stock, 6% cumulative, $100.00 par:		
Authorized, 2,000 shares.		
Issued, 1,000 shares		$100,000.00
Common Stock, $100.00 par:		
Authorized, 5,000 shares.		
Issued, 4,000 shares	$400,000.00	
Less Discount on Stock	20,000.00	380,000.00
Dividend Payable, 10%, in Common Stock		39,000.00
Common Stock Subscribed, 350 shares	$ 35,000.00	
Paid-in Surplus Subscribed	1,000.00	
	$ 36,000.00	
Less Subscriptions Receivable	16,000.00	20,000.00
Paid-in Surplus		10,000.00
Earned Surplus:		
Reserve for Contingencies	$ 25,000.00	
Reserve for Treasury Stock	9,000.00	
Unappropriated	66,000.00	100,000.00
		$649,000.00
Less Treasury Stock, 100 shares common, at cost	9,000.00	$640,000.00

Example 2

Capital:		
Preferred Stock, 6% cumulative, $100.00 par:		
Authorized, 2,000 shares.		
Issued, 1,000 shares		$100,000.00
Common Stock, $100.00 par:		
Authorized, 5,000 shares.		
Issued, 4,000 shares	$400,000.00	
Less Discount on Stock	20,000.00	380,000.00
Dividend Payable, 10%, in Common Stock		39,000.00
Common Stock Subscribed, 350 shares	$ 35,000.00	
Capital Subscribed in Excess of Par Value of Shares	1,000.00	
	$ 36,000.00	
Less Subscriptions Receivable	16,000.00	20,000.00
Capital Received for Shares in Excess of Par Value of Capital Stock Issued		10,000.00
Retained Income:		
Reserve for Contingencies	$ 25,000.00	
Unappropriated (of which $9,000.00 is restricted by purchase of treasury stock)	75,000.00	100,000.00
		$649,000.00
Less Treasury Stock, 100 shares common, at cost	9,000.00	$640,000.00

Book Value per Share of Common Stock

The "value" of a share of stock may have varying connotations. It may mean (1) par value, (2) market value, or (3) book value. In order to know what is meant, the word "value" should always be used with a qualifying adjective. In this section, "book value" per share will be discussed.

By *book value per share* is meant the amount of net assets of a corporation behind each share of outstanding stock, in terms of the values of the balance sheet. Book value per share of stock generally means per share of outstanding common stock.

The calculation of book value is illustrated in the following example.

Example

The condensed balance sheet of the Superior Sales Company on December 31, 19__, was

Assets		*Equities*	
Current Assets	$14,356,987.00	Current Liabilities	$ 2,216,010.00
Fixed and Other Assets	2,464,891.00	Long-Term Debt	4,100,000.00
			$ 6,316,010.00
		Net Worth:	
		6% Preferred Stock, $100.00 par	$ 1,000,000.00
		Common Stock, no-par:	
		Issued, 210,000 shares	6,400,000.00
		In treasury, 2,000 shares at cost	(60,000.00)
		Paid-in Surplus	840,000.00
		Retained Income	1,765,868.00
		Reserve for Contingencies	500,000.00
		Reserve for Treasury Stock	60,000.00
			$10,505,868.00
	$16,821,878.00		$16,821,878.00

All dividends on the 6% preferred stock were paid in full to date.

Net worth (or net assets)	$10,505,868.00
Less net worth allocated to preferred stock, 10,000 × $100.00	1,000,000.00
Net worth allocated to common stock	$ 9,505,868.00
	÷
Number of shares of common stock outstanding	208,000
Book value per share of common stock	$ 45.70

This book value of $45.70 is the amount which the holder of a share of outstanding common stock would receive if the corporation were liquidated and all assets were converted into cash at balance-sheet values.

Book value, from the point of view of corporate liquidation, is relatively unimportant. It is more likely to be used as a basis of comparison with the market price of a corporation's stock.

If dividends on the company's preferred stock were three years in arrears, the above calculation would be revised to read

Net worth (or net assets)		$10,505,868.00
Less net worth allocated to preferred stock:		
10,000 × $100.00 (par)	$1,000,000.00	
Dividend arrearages: 3 × $60,000.00	180,000.00	1,180,000.00
Net worth allocated to common stock		$ 9,325,868.00
		÷
Number of shares of common stock outstanding		208,000
Book value per share of common stock		$ 44.84

Net Income per Share of Common Stock

Earnings per share of common stock are generally calculated in the following manner.

Example

During the year 1958 the net income of the Superior Sales Company was $2,140,000.00. Then

Net income for the year 1958	$2,140,000.00
Less dividends on preferred stock for 1958:	
10,000 × $6.00	60,000.00
Net income allocated to common stock	$2,080,000.00
	÷
Number of shares of common stock outstanding	208,000
Net income per share of common stock	$ 10.00

PROBLEMS

Problem 20–1. Following is the condensed trial balance of the J. P. Belmont Corporation on December 31, 19__:

Cash	$200,000.00	
Accounts Receivable	42,000.00	
Reserve for Bad Debts		$ 2,000.00
Notes Receivable	50,000.00	
Reserve for Notes Receivable Discounted		50,000.00
Inventory	230,000.00	
Plant and Equipment	200,000.00	
Reserve for Depreciation		50,000.00
Accounts Payable		54,000.00
Cash Dividend Payable		6,000.00
Reserve for Income Taxes Payable		60,000.00
Common Stock, $100.00 par		180,000.00
Dividend Payable in Common Stock		100,000.00
Treasury Stock, 300 shares, at cost	30,000.00	
Earned Surplus		200,000.00
Reserve for Contingencies		50,000.00
	$752,000.00	$752,000.00

Required

Balance sheet, December 31, 19__. Use account titles reflecting the *best* accounting terminology.

Problem 20–2. The following is a list of the general ledger balances of the ABC Company, Inc.,—December 31, 1958:

$ 10,000.00	Notes Receivable Discounted
300,000.00	Allowance for Depreciation
7,500.00	Cash Dividend Payable
170,068.00	Cash
508,000.00	Common Stock (no par), 10,000 shares
11,200.00	Treasury Stock, Common, 200 shares
500,000.00	6% Preferred Stock, $100.00 par (authorized 10,000 shares)
100,000.00	Reserve for contingencies
400,000.00	Inventory
40,800.00	Subscriptions Receivable
25,000.00	Premium on Preferred Stock
2,000.00	Capital Surplus Subscribed
200,000.00	Earned Surplus
99,568.00	Stock Dividend Payable—1,960 shares
900,000.00	Plant and Equipment
100,000.00	Preferred Stock Subscribed—1,000 shares
30,000.00	Notes Receivable
300,000.00	Accounts Receivable

Required

Balance sheet, December 31, 1958. Use the best of accounting terminology to replace any unsatisfactory titles in the list above.

Problem 20–3. From the following information prepare a statement of retained income and paid-in surplus for the Holland Sales Company for the year ended December 31, 1958:

Retained income, December 31, 1957		$111,206.00
Paid-in surplus, December 31, 1957		245,029.00
Net income for 1958		27,178.00
Excess of sales price of treasury stock over cost of acquisition		5,000.00
Creation of reserve for contingencies, December 31, 1958		10,000.00
Cash dividends paid in 1958:	Preferred stock, $7.00 per share	7,000.00
	Common stock, $1.00 per share	5,000.00
Dividend declared (25%) December 29, 1958, payable in common stock, $20.00 par		25,000.00

Problem 20–4. On December 31, 19__, the condensed balance sheet of the Capital Sales Company was

Assets		*Equities*	
Assets	$327,000.00	Liabilities	$ 17,000.00
		7% Preferred Stock, $100.00 par cumulative	100,000.00
		Common Stock, $100.00 par .	100,000.00
		Retained Income	60,000.00
		Reserve for Contingencies .	50,000.00
	$327,000.00		$327,000.00

All dividends on the preferred stock have been paid in full to date. In the event of corporate liquidation, the preferred stock is entitled to a value of $100.00 per share.

Required

1. What is the book value per share of common stock?
2. What is the book value per share of common stock, assuming dividends on the preferred stock to be in arrears $21.00 per share?

Problem 20–5. On December 31, 19__, the condensed balance sheet of the Dixie Sales Company was

Assets		*Equities*	
Current Assets	$302,000.00	Accounts Payable . . .	$ 20,000.00
Fixed Assets	150,000.00	Reserve for Income Taxes Payable	12,000.00
Allowance for Depreciation .	(50,000.00)	Dividends Payable . .	15,000.00
			$ 47,000.00
		7% Preferred Stock, $100.00 par	100,000.00
		Common Stock, $100.00 par	200,000.00
		Common Stock in Treasury, 300 shares . . .	(30,000.00)
		Earned Surplus . . .	75,000.00
		Reserve for Contingencies	10,000.00
			$355,000.00
	$402,000.00		$402,000.00

In the event of corporate liquidation, the company's cumulative preferred stock is entitled to $100.00 per share. There are no dividends in arrears.

Required

1. What is the book value per share of common stock?
2. What are the earnings per share of common stock? The net income for the year 19__ is $24,000.00.

Problem 20–6. On December 31, 19__, the condensed balance sheet of the Essex Sales Company was

Assets		*Equities*	
Cash	$ 4,000,000.00	Accounts Payable	$ 3,000,000.00
Noncash Assets	8,400,000.00	Debenture Bonds Payable	2,000,000.00
		6% Preferred Stock, $100.00 par	1,000,000.00
		Common Stock, $100.00 par	3,000,000.00
		Treasury Stock (common) at par	(100,000.00)
		Paid-in Surplus	500,000.00
		Retained Income	2,000,000.00
		Reserve for Contingencies	1,000,000.00
	$12,400,000.00		$12,400,000.00

Required

1. Book value per share of common stock. There are no dividend arrearages.
2. Book value per share of common stock if dividends on the preferred stock are in arrears $15.00 per share.
3. Earnings per share of common stock assuming net income for the year to have been $292,000.00.

Problem 20–7. After the books of the Easton Sales Company had been closed, December 31, 19__, the condensed trial balance of the general ledger was

Cash	$111,000.00	
Accounts Receivable	204,000.00	
Inventory	86,000.00	
Plant and Property	212,000.00	
Treasury Stock (Common) at par and cost	20,000.00	
Accounts Payable		$127,400.00
Reserve for Income Taxes Payable		16,000.00
5% Preferred Stock, $100.00 par		100,000.00
Common Stock, $50.00 par		300,000.00
Earned Surplus		39,600.00
Reserve for Treasury Stock		20,000.00
Reserve for Undivided Profits		30,000.00
	$633,000.00	$633,000.00

Required

What is the book value per share of common stock? Dividends on the preferred stock have been paid in full to date.

Problem 20–8. The condensed balance sheet of the City Sales Company on December 31, 19__, was

Assets		*Equities*	
Sundry Assets . . .	$7,580,000.00	Sundry Liabilities	$ 800,000.00
		6% Preferred Stock, $100.00 par	1,000,000.00
		Common Stock, no par:	
		Issued 104,000 shares .	4,160,000.00
		In treasury, 4,000 shares, at cost	(200,000.00)
		Paid-in Surplus	520,000.00
		Retained Income	600,000.00
		Reserve for Contingencies .	500,000.00
		Reserve for Cost of Treasury Stock	200,000.00
	$7,580,000.00		$7,580,000.00

All dividends on the preferred stock were paid in full to date.

Required

1. What is the book value per share of common stock?
2. What would the book value per share of common stock be if dividends on the preferred stock were 5 years in arrears?
3. What are the earnings per share of common stock? The statement of income for the year ended December 31, 19__, shows net income of $580,000.00.

Problem 20–9. The condensed balance sheet of the Y & M Transit Company was

Cash	$1,700,000.00	7% Preferred Stock, $100.00 par	$ 500,000.00
		Common Stock, $100.00 par .	1,000,000.00
		Retained Income	200,000.00
	$1,700,000.00		$1,700,000.00

The company was in the process of being liquidated. Dividends on the cumulative preferred stock were in arrears in the amount of $35.00 per share.

Required

1. How should the cash of $1,700,000.00 be distributed?
2. If the company had cash of $1,300,000.00 and an earned deficit of $200,000.00, how should the cash be distributed?

Problem 20–10. The L-A-B Sales Company was organized on January 22, 19__, with an authorized capital stock of 100,000 shares common stock, no par. For the year 19__ its condensed transactions were as follows:

1. Sold for cash, 10,000 shares at 11.
2. Sold for cash, 10,000 shares at 15.
3. Received subscriptions, 10,000 shares at 17.
4. Two months later, collected these subscriptions in full.

5. Received subscriptions, 10,000 shares at 19.
6. One month later, collected 10% on each subscription, $19,000.00.
7. Three months later, collected 90% on each subscription, $171,000.00.
8. The net income for 19__ was $160,000.00 (realized in cash).
9. Cash dividend declared and paid, $1.00 per share.
10. Declared and paid a 10% dividend, payable in 4,000 shares of common stock.
11. Purchased 1,000 shares of treasury stock at 18.
12. An appropriation of surplus was made to cover the cost of treasury stock, $18,000.00.
13. Purchased 1,000 shares of treasury stock at 19, and another 1,000 shares at 20.
14. An appropriation of surplus was made to cover the cost of treasury stock, $39,000.00.
15. Sold 3,000 shares of treasury stock for cash at a price of 21.
16. Canceled the appropriation of surplus to cover the cost of treasury stock, $57,000.00.

Required

1. Record the above transactions in appropriate T accounts.
2. Balance sheet, December 31, 19__.

Problem 20–11. The after-closing trial balance of Bailey & Wood, Inc., on December 31, 1957, was as follows:

Cash	$ 50,802.00	
Notes Receivable	30,000.00	
Notes Receivable Discounted		$ 12,000.00
Accounts Receivable	101,018.00	
Merchandise Inventory	160,011.00	
Prepaid Expenses	21,010.00	
Fixed Assets	201,142.00	
Allowance for Depreciation		32,912.00
Accounts Payable		60,410.00
Preferred Stock, 6%, $100.00 par		100,000.00
Common Stock, no-par, 20,000 shares		187,055.00
Retained Income		130,607.00
Paid-in Surplus		40,999.00
	$563,983.00	$563,983.00

During 1958 the following transactions occurred in order:

1. 1,000 shares of the company's own common stock were purchased in the open market at a cash cost of $10,780.00.
2. Sales of merchandise on account, $360,000.00.
3. Collections from customers were $347,018.00. And, in addition, all notes receivable were paid.
4. Purchases of merchandise on account, $200,000.00.
5. Paid accounts payable, $250,000.00.
6. Paid expenses, $40,000.00.

7. An allowance of $16,000.00 was created against outstanding 1957 accounts receivable.
8. Estimated uncollectible 1958 accounts receivable, $9,000.00.
9. Depreciation expense for 1958 was $20,000.00.
10. All of the treasury stock was sold for cash, $20,011.00.
11. A stock dividend of 1 share for each 5 shares outstanding was declared on the common stock out of retained income. Payment of this dividend was made December 1, 1958.
12. On December 31, 1958, a cash dividend of $6.00 per share was paid on the preferred stock; and a cash dividend of $1.00 per share was declared on the common stock, payable January 20, 1959.
13. Income taxes for 1958 estimated, $3,000.00.

Required

1. Statement of income for the year ended December 31, 1958. On this date the inventory of merchandise was $114,000.00, and prepaid expenses, $2,021.00.
2. Balance sheet, December 31, 1958.
3. Statement of retained income for the year ended December 31, 1958.

Problem 20–12. Brookes & Company was organized on July 1, 1958, with an authorized capitalization of

8% preferred stock, par value $100.00, 1,000 shares, and
common stock, no-par value, 1,000 shares.

The following transactions occurred on the dates named:

1958

July 1 500 shares of preferred stock are subscribed for at par. A 50% down payment is received with the balance payable in quarterly installments of $5,000.00 each.

725 shares of common stock are sold for $38,492.00. Payment is immediately received as follows:

Merchandise Inventory	$20,762.00	Furniture and Fixtures	$2,049.00
Accounts Receivable	11,431.00	Land	4,250.00

July 30 100 shares of preferred stock are sold for cash at $110.00 per share.

Aug. 1 25 shares of common stock are issued to the organizers of the corporation and attorneys, in payment of organization costs, $1,200.00.

Aug. 15 275 shares of common stock are issued in payment of a building worth $15,000.00.

Oct. 1 $5,000.00 cash is received as quarterly payment on preferred stock subscriptions.

Nov. 1 The stock issued to organizers on August 1 is reacquired by a cash payment of $2,000.00.

Dec. 31 Sales of merchandise on account to date, $110,000.00.
Purchases of merchandise on account to date, $105,000.00.
Collections on accounts receivable, $90,000.00.
Payments on accounts payable, $58,000.00.
Operating expenses paid, $35,000.00.
Dec. 31 Cash dividends are declared: 4% on the preferred stock, $5.00 on the common stock.
Income taxes for 1958 estimated, $5,200.00.

Required

1. Statement of income for the six months ended December 31, 1958. Merchandise inventory, December 31, 1958, $68,088.00.
2. Balance sheet, December 31, 1958. Do not write off organization expenses.

Problem 20–13. Following is the condensed balance sheet of Kerr & Brown, Inc., on a certain date:

Cash	$ 100,000.00	Accounts Payable	$ 250,000.00
Noncash Current Assets	400,000.00	Common Stock, $100.00 par	800,000.00
Fixed (Assets (net)	800,000.00	Retained Income	550,000.00
Other Assets	300,000.00		
	$1,600,000.00		$1,600,000.00

The following transactions occurred in the order indicated:

1. Part of the balance of the Retained Income account was capitalized by the payment of a 25% dividend in capital stock.
2. Stockholders donated 10% of their shares to the company.
3. The book value per share of outstanding stock was determined and the donated stock was sold at a price equal to this book value.
4. 1,000 shares of its own stock were acquired by Kerr & Brown, Inc., at a cost of $140,000.00.
5. 600 shares of treasury stock were sold for $16,000.00 more than their cost.
6. 400 shares of treasury stock were sold for $75,000.00.
7. A cash dividend of 6% was declared on the outstanding common stock.

Required

1. Journal entries to record the foregoing transactions.
2. New balance sheet giving effect to these transactions.

Chapter 21

THE VOUCHER SYSTEM / CHECK REGISTER / PETTY CASH

Introduction

One of the attributes of good management is effective control of expenditures. In small businesses, it is possible for individual owners or managers to exercise effective personal control over expenditures. As businesses grow in size, however, the problem of personal supervision over expenditures becomes increasingly difficult. Bills may be incurred and disbursements made under the authorizations of various employees; and often expenditures may be incurred and disbursements made without adequate managerial assurance that the bills were properly incurred, that goods or services have been satisfactorily received, that prices were proper, and that the bookkeeping record of these transactions was adequate.

If management is to manage effectively, its control over the assets, liabilities, and operations of a business must be thorough. Expenditures and disbursements must be well controlled. To this end, procedures are used by which

expenditures are authorized and checked,
safeguards are established against the acts of fraud, error, and misappropriation, and
an efficient accounting flow of operating procedures is maintained.

In broader outline these "self-policing" procedures are called a "system of internal control." An effective system of internal control is one wherein the accounting work of one employee is complemented and verified by the work of another employee—both employees working independently and without duplication of each other's work.

One of the major components of an effective system of internal control is the "voucher system." This is a procedure for the handling of expenditures so that

each approved liability is recorded as incurred, there being assurance that the liability is proper and that it is recorded in the books of the month in which the expenditure was incurred;

each bill and disbursement, as a general rule, is individually approved and processed—the steps of purchasing, receiving, checking, recording, and payment, involving the complementary checks and approvals of two or more responsible employees.

What Is a Voucher? A voucher is a written authorization for an expenditure (adequately described), its accounting record, and its payment.

Form of Voucher. The actual form of a voucher varies from business to business. Regardless of the specific form used in any given business, all vouchers have certain common essentials. Each voucher is a written document, consecutively numbered and containing the following items:

Name and address of creditor
Description of the liability incurred as to
  Nature
  Terms of payment
  Amount of payment to be made, when, and to whom
Written approvals covering
  Incurrence of the liability
  Approval for entry on the books
  Entry of transaction on books
  Payment
Date of payment and check number

It is apparent, then, that one of the prime functions of a voucher is that of assigning responsibility for an expenditure.

Operation of the Voucher System

The operation of the voucher system is shown in the following procedures:

1. When an invoice is received from a creditor it is checked for validity against the terms of the purchase order. It is additionally checked for assurance that the items billed have been received and for assurance, also, that all extensions and totals are correct. In order to systematize effectively this verification process, it is common practice for purchasers to imprint with a rubber stamp all bills received. One example of this imprint (see also page 108) showing steps and approvals, is the following:

Purchase Order No. ___	DATE	INITIALS
Received O.K.		
Storeroom _____	_____	_____
Direct to department _____	_____	_____
Prices and Terms O.K. _____	_____	_____
Extensions and Footings O.K. ___	_____	_____

When an invoice has been found to be correct in all essentials, it is ready to be "vouchered," i.e., a voucher is prepared.

2. The voucher is prepared as follows: A voucher clerk records invoice information on the fact and back of the voucher (as called for by the illustrative voucher forms on pages 436 and 437). The invoice and supporting papers are fastened to or placed inside the voucher. The voucher clerk, however, does not decide what accounts are to be debited. This is done by a responsible employee of the accounting department who also examines or "audits" the voucher. Upon his approval, the voucher is ready to be recorded in the voucher register.

3. The voucher is recorded. Vouchers, being numbered consecutively, are entered in numerical sequence.

4. The voucher is filed in the unpaid voucher file according to its date of payment.

5. When the date of payment arrives, the voucher is removed from the unpaid voucher file and passed to the treasurer for his signature approving payment of the voucher. When this approval has been obtained the procedure continues as follows:

a) The cashier prepares a check. (*Note.* Often the check is prepared at the same time that the voucher is prepared. When payment date arrives, the checks are validated by the treasurer's signature; and then mailed.)
b) The check number is recorded on the voucher.
c) The check is given to the treasurer for signature. (See also [a] above.)
d) The check is mailed.
e) The voucher is sent to the bookkeeper, who (i) records the disbursement in the cash payments book and (ii) makes a memorandum of the payment in the "date paid" column of the voucher register.

6. The voucher is filed with other paid vouchers, usually in consecutive sequence. The numerical sequence permits vouchers to be found easily. This is a convenience not only to the personnel of a given business but also to professional public accountants who may service the business as independent auditors.

The Voucher Register

The voucher register is essentially a multicolumn purchases book in which invoices from *all* creditors are recorded before they are paid. In its most complete form the voucher register is used for the recording of all expenditures prior to their actual payment. In the latter respect, however, it should be understood that entries in the voucher register are entries for specific liabilities of known amounts which are expected to be paid in the near future. Bills for purchases and expenses will be vouchered immediately but not an item like accrued taxes. Taxes will be recorded in the voucher register only in the month of payment.

The Pickering Corporation
1129 Parker Avenue
Cushing, North Carolina

VOUCHER NO. _____

DATE _____

TERMS _____

DUE _____

CHECK NO. _____ DATE _____

PAYEE _____

_____

_____

INVOICE

DATE	NO.	MEMORANDUM	AMOUNT

CASH DISCOUNT _____

NET _____

AUDITED: _____ ENTERED _____ APPROVED FOR PAYMENT: _____

TREASURER

Inside (or face) of Voucher

A typical voucher register is illustrated on pages 438–439. Two points, particularly, should be noted in the use of this voucher register:

1. At the end of the month, column *totals* are posted to the indicated accounts in the general ledger, i.e., the total of the Vouchers Payable column is posted as a *credit* to the Vouchers Payable account. Values appearing in the other columns—the distribution columns—of the voucher register are *debited* to the accounts named. All columns are posted in total except the column headed "Miscellaneous." The accounts in the Miscellaneous column are posted individually. The figures in parentheses are ledger folio references.

2. The Vouchers Payable account is a controlling account which replaced the Accounts Payable account in the general ledger. It is not

DISTRIBUTION

ACCOUNT NO.	DEBIT	AMOUNT
425	Purchases	
450	Freight In	
620	Factory Repairs	
640	Factory Supplies	
650	Heat, Light, Power	
670	Insurance	
680	Misc. Factory Expense	
701	Advertising	
720	Delivery Expense	
740	Freight Out	
760	Misc. Selling Expense	
790	Traveling Expense	
840	Misc. General Expense	
850	Office Supplies	
860	Postage	
870	Stationery and Printing	
884	Telephone and Telegraph	
	TOTAL	

Fold Here

VOUCHER NO. _____

DUE _____

PAYEE _____

_____

_____

AMOUNT OF INVOICE _____

CASH DISCOUNT _____

NET _____

PAID BY CHECK NO. ____ DATE _____

Back of Voucher

necessary, however, to maintain a subsidiary ledger for Vouchers Payable (although this can be done if the work involved is worth while). The details of the balance of the Vouchers Payable controlling account, instead of being the total of the open accounts in a subsidiary ledger are, instead, the total of the *unpaid* vouchers of the voucher register.

At the end of each month the balance of the Vouchers Payable account should be reconciled with the total of unpaid vouchers, i.e., it should equal the sum of the unpaid vouchers in the voucher register. This balance, of course, should also be the sum of the vouchers in the unpaid voucher file. The voucher reconciliation schedule of a particular date should be retained at least until the next schedule of unpaid vouchers has been satisfactorily completed.

VOUCHER REGISTER

Left-Hand Page

LINE NO.	DATE	VOUCHER NO.	CREDITOR	PAID		CREDIT	DEBIT					LINE NO.
				Date	*Check No.*	*Vouchers Payable*	*Administrative Salaries*	*Advertising*	*Delivery Expense*	*Freight In*	*General Expense*	
	1958											
1	Feb. 2	54	Weld & Company			406.00						1
2	3	55	Postmaster	Feb. 3	60	25.00						2
3	5	56	Bell Telephone Company	Feb. 10	84	23.60						3
4	6	57	Terry Specialties, Inc.			212.10						4
5	9	58	Royal Super Service Station	Feb. 14	91	19.47			19.47			5
6	10	59	Black Manufacturing Co.			27.02						6
7	12	60	Underwood Typewriter Co.	Feb. 12	89	12.50					12.50	7
8	13	61	Black Manufacturing Co.			602.15						8
9	14	62	Payroll	Feb. 14	92–109	1,217.50	450.00		62.50			9
10	16	63	Royal Super Service Station			17.20			17.20			10
11	18	64	The Daily News			52.00		52.00				11
12	19	65	Gilbert & Son			614.17						12
13	20	66	Chesapeake & Ohio Railway	Feb. 20	110	11.04				11.04		13
14	23	67	Royal Super Service Station			29.02			29.02			14
15	25	68	First National Bank	Feb. 25	111	500.00						15
16	26	69	Heyer Lettergraph Co.			35.00						16
17	27	70	Selby Office Supply Co.			29.45						17
18	28	71	Royal Super Service Station			28.14			28.14			18
19	28	72	George Tener	Feb. 28	112	214.02						19
20	28	73	Payroll	Feb. 28	113–130	1,229.60	450.00		62.50			20
21												21
22						5,304.98	900.00	52.00	218.83	11.04	12.50	22
23												23
24						(57)	(4)	(5)	(10)	(14)	(21)	24
25												25

Right-Hand Page

LINE NO.	DEBIT										LINE NO.
	Labor (Misc.)	*Office Supplies*	*Postage*	*Purchases*	*Sales Salaries*	*Selling Expense Miscellaneous*	*Traveling Expense*	*Miscellaneous*			
								Amount	*L.F.*	*Name of Account*	
1				406.00							1
2			25.00								2
3								23.60	49	Telephone and Telegraph	3
4				212.10							4
5											5
6				27.02							6
7											7
8				602.15							8
9	205.00				500.00						9
10											10
11											11
12				614.17							12
13											13
14											14
15								500.00	28	Notes Payable	15
16								35.00	31	Office Equipment	16
17		29.45									17
18											18
19							214.02				19
20	217.10				500.00						20
21											21
22	422.10	29.45	25.00	1,861.44	1,000.00		214.02	558.60			22
23											23
24	(27)	(32)	(36)	(37)	(41)		(50)				24
25											25

Account No. 700 SELLING EXPENSE Month of _____ 19__

$_____

VOUCHER, OR JOURNAL, PAGE NO.	701 ADVERTISING	710 COMMISSIONS	720 DELIVERY EXPENSE	730 DEPRECIATION EXPENSE	740 FREIGHT OUT	760 MISCELLANEOUS SELLING EXPENSE	780 SALES SALARIES	790 TRAVELING EXPENSE	
TOTALS									

HOW MANY COLUMNS? The number of distribution columns which should be included in a voucher register is dependent upon the requirements of the business which is to use a voucher register. Some businesses, obviously, will require more elaborate columnar records than others. It is sufficient to say that as many columns should be used as may be necessary and *worth while*. Each column should justify its existence by a reasonable amount of use.

A very useful arrangement of the distribution columns of a voucher register is illustrated on page 443. One column is employed for each *general class* of expenditure; the detailed accounts to be debited are indicated by account numbers placed opposite related amounts.[1] Although each value in a column may be separately posted, greater speed will ordinarily be achieved if postings are made from a summarization of values below the total of each column. This is illustrated in the example. Postings to the general ledger are indicated by check marks (✓) inasmuch as accounts are arranged in the general ledger according to account *number*.

This type of voucher register is especially serviceable for businesses which maintain a controlling account for each general class of expenditure. For instance, if controlling accounts were kept for manufacturing expenses, selling expenses, and general expenses, respectively, only column totals for these columns in the voucher register would be posted to the Manufacturing Expense account, the Selling Expense account, and the General Expense account, respectively, in the general ledger. The "Summary of Totals," as such, would not be prepared; instead, the bookkeeper in charge of the subsidiary expense ledgers would post the individual values appearing in the control columns to each of the expense accounts named.

The accounts of subsidiary expense ledgers may be either of two forms: (1) the usual account form, or (2) specially ruled multicolumn account forms, one page for each major expense classification. One example of this form of expense account appears on page 440.

The Check Register

The check register is simply a cash payments book under another name. All disbursements are made by check. The check register, as used under the voucher system, is relatively simple in form (see page 444).

Occasionally it may be advisable to include an additional debit column in the voucher register. This column would care for occasional miscellaneous debits of nominal amount not covered by vouchers and checks, such as bank service fees and similar charges. Even these charges, however, may be entered first in the voucher register.

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[1] The accounts and account numbers used in this illustration are taken from the chart of accounts on pages 613–616.

VOUCHER

LINE NO.	DATE	VOUCHER NO.	CREDITOR	PAID		CREDIT					
				Date	*Check No.*	*Acct. No.*	✓	*Vouchers Payable*	*Acct. No.*	✓	*Material Purchases*
	1950										
1	Feb. 3	114	White Supply Company					1,947.82			
2	5	115	Lewisohn & Company	Feb. 14	3124			16,247.20	425		16,247.20
3	6	116	Bell Telephone Company	Feb. 10	3070			112.10			
4	6	117	Chesapeake & Ohio Railway	Feb. 6	3049			687.02	450		687.02
5	10	118	Sundry Salesmen	Feb. 10	3071–9			800.46			
6	12	119	Lowman & Hanford					126.20			
7	13	120	City Treasurer					1,284.10			
8	14	121	Main Office Payroll	Feb. 14	3130–90			13,120.00			
9	14	122	Factory Payroll	Feb. 14	3191–4294			34,939.82			
10											
11											
12	14	123	Western Union Telegraph Company	Feb. 20	4318			145.10			
13	14	124	Berle & Son					18,746.27	425		18,746.27
14	16	125	First National Bank	Feb. 16	4310			10,100.00			
15											
16	18	126	Conway Hardware Company					3,814.20			
17	19	127	Times-Tribune Company					1,100.00			
18	20	128	Republic Iron and Steel Company	Feb. 24	4319			28,889.40	426		28,889.40
19	23	129	Segal-Simmons, Inc.					1,214.10			
20	24	130	Central Garage Company					299.25			
21	25	131	International Nickel Company					26,042.21	427		26,042.21
22	25	132	Sundry Salesmen	Feb. 25	4322			720.21			
23	26	133	Times-Tribune Company					910.00			
24	27	134	Segal-Simmons, Inc.					370.00			
25	28	135	The Nold Company					8,476.20	425		8,476.20
26	28	136	Main Office Payroll	Feb. 28	4330–89			12,900.00			
27	28	137	Factory Payroll	Feb. 28	4390–5524			34,485.89			
28											
29											
30	28	138	Petty Cash	Feb. 28	5525			45.06			
31											
32						140	✓	217,522.61			99,088.30
33											
34			SUMMARY OF TOTALS						425	✓	43,469.67
35									426	✓	28,889.40
36									427	✓	26,042.21
37									450	✓	687.02
38											
39											
40											99,088.30

Partial Payments

If, at the date of original entry, an invoice is expected to be paid in installments, a separate voucher should be made out for each installment payment. If, however, a payment on account is to be made against the amount of a voucher already recorded on the books, the original voucher should be canceled and two new vouchers issued in its place, one for the part to be paid, the other for the part unpaid. Partial payments are illustrated in the example on page 445.

REGISTER

DEBIT																
Acct. No.	✓	*Direct Labor*	*Acct. No.*	✓	*Manufacturing Expense*	*Acct. No.*	✓	*Selling Expense*	*Acct. No.*	✓	*General Expense*	*Acct. No.*	✓	*Miscellaneous*	LINE NO.
			670		1,947.82										1
															2
									884		112.10				3
															4
						790		800.46							5
									850		126.20				6
			690		1,040.00				880		244.10				7
			620		1,800.00	780		4,200.00	801		7,120.00				8
501		9,876.29	650		11,820.14										9
502		6,414.80													10
503		6,828.59													11
									884		145.10				12
															13
												130		10,000.00	14
												1050		100.00	15
			630		3,814.20										16
						701		1,100.00							17
															18
			630		1,214.10										19
						720		299.25							20
															21
						790		720.21							22
						701		910.00							23
			630		370.00										24
															25
			620		1,500.00	780		4,300.00	801		7,100.00				26
501		10,046.00	650		12,010.50										27
502		7,001.10													28
503		5,428.29													29
						790		15.00	860		30.06				30
		45,595.07			35,516.76			12,344.92			14,877.56			10,100.00	31 32
501	✓	19,922.29	620	✓	3,300.00	701	✓	2,010.00	801	✓	14,220.00	130	✓	10,000.00	33 34
502	✓	13,415.90	630	✓	5,398.30	720	✓	299.25	850	✓	126.20	1050	✓	100.00	35
503	✓	12,256.88	650	✓	23,830.64	780	✓	8,500.00	860	✓	30.06				36
			670	✓	1,947.82	790	✓	1,535.67	880	✓	244.10				37
			690	✓	1,040.00				884	✓	257.20				38
		45,595.07			35,516.76			12,344.92			14,877.56			10,100.00	39 40

Returned Purchases and Allowances

If it is necessary to record a credit memorandum received after a liability has been recorded in the voucher register, the original voucher may be canceled and a new voucher issued for the reduced amount. The new voucher would be recorded in the voucher register as follows:

Vouchers Payable (amount of old voucher)	1,000.00	
Vouchers Payable (amount of new voucher) . .		900.00

CHECK REGISTER

DATE	CHECK NO.	PAYEE	VOUCHER NO.	DEBIT	CREDIT	
				Vouchers Payable	*Purchases Discounts*	*Cash*

Returned Purchases and Allowances (amount of credit memorandum) 100.00

The first and third values in this entry would be placed in the Miscellaneous Accounts Debited column of the voucher register. The value of $100.00 would be circled or placed in parentheses to indicate a credit.

This method of handling a credit memorandum is illustrated in the example on page 445.

An alternative method of handling a credit memorandum is that of recording the credit as a separate voucher in the voucher register. The amount of the credit memorandum is shown as a *debit* in the Vouchers Payable column of the voucher register and as a *credit* in the distribution columns. The new voucher and the original voucher to which the credit memorandum is related should be cross-referenced to each other. The original voucher should be marked in such a way that only the net amount owed will be paid when the date of payment arrives.

Payment of a Voucher by a Note Payable

When a voucher liability is discharged by the issuance of a promissory note, the transaction can be satisfactorily handled by an entry in the general journal:

Vouchers Payable . . . . . xxx xx
    Notes Payable . . . . . xxx xx
To record payment of Vouchers # __ by 60-day note, dated today.

When this entry has been recorded, the unpaid voucher should be removed from the unpaid voucher file and marked "Paid by note, see journal, page —" and filed in the paid voucher file. In the Paid column of the voucher register suitable notation should be made indicating that the voucher in question has been discharged by note payable rather than by

VOUCHER REGISTER

DATE	VOUCHER NO.	CREDITOR	EXPLANATION	PAID		CREDIT	DEBIT		
				Date	*Check No.*	*Vouchers Payable*	*Purchases*	*Miscellaneous*	
								Amount	*Name of Account*
1958									
Mar. 10	179	Bendix-Page, Inc.	2/10, n/60.	See Vo.	#187	1,000.00	1,000.00		
15	180	Edie & Son	$10,000 invoice payable in 5 monthly installments, beginning April 1.			2,000.00			
15	181	Edie & Son				2,000.00			
15	182	Edie & Son				2,000.00			
15	183	Edie & Son				2,000.00			
15	184	Edie & Son				2,000.00		10,000.00	Machinery
16	185	The Nold Co.	To cancel Vo. #135	Mar. 15	7017	5,000.00			
16	186	The Nold Co.	" " " "			3,476.20		8,476.20	Vouchers Payable
17	187	Bendix-Page, Inc.	To cancel Vo. #179			900.00		1,000.00	Vouchers Payable
								(100.00)	Returned Purchases and Allowances

Note: In the Paid column on the line where Voucher #135 was originally entered should be written "See Vo. #185–186."

check. (This act shows, again, the importance of making suitable notation in the Paid column of the voucher register whenever a debit is made to the Vouchers Payable account.)

Later, when the note payable is to be paid, a new voucher will be prepared and recorded in the voucher register; the debit in this case will be to Notes Payable for the face of the note and to Interest Expense, if any.

Index of Creditors

If it is desired to have a record of the amount of business transacted with each creditor (vouchers being filed numerically), a memorandum card file can be maintained for this purpose. The following type of card would be satisfactory for this file:

CREDITOR _____

_____

DATE	VOUCHER NO.	AMOUNT	DATE	VOUCHER NO.	AMOUNT	DATE	VOUCHER NO.	AMOUNT

If a memorandum card file of this kind is much used, it would probably be better to maintain, instead, a full subsidiary ledger.

Advantages and Disadvantages of the Voucher System

The advantages of the voucher system are summarized as follows:

1. Each expenditure of a business is responsibly approved by employees or officers having authority to approve entries and payments relating to creditors' invoices. Responsibility for each step of this approval process is fixed.[2]

[2] These procedures are often extended to entries intended for the general journal. Each journal entry is prepared upon a form designed for that purpose. Each entry must be audited by a responsible employee, and signed by another, before it can be entered on the books. Frequently, these "journal vouchers" constitute the general journal itself. Posted vouchers are conveniently filed in a post binder.

2. Each voucher includes invoices and other written materials which support the propriety of the voucher.
3. Expenditures are generally recorded in the month in which they have been incurred.
4. The prompt payment of bills, with benefit of cash discount privilege is facilitated.
5. The check register is a simple three-column cash payments book.
6. There is no subsidiary ledger (as a general rule). There are fewer postings. New accounts, often representing but a transaction or two, are handled with a minimum of bookkeeping labor.

It is here appropriate to state, somewhat parenthetically, that some businesses eliminate formal vouchers and, instead, use the voucher register as an accounts payable or invoice register. Invoices are consecutively numbered and entered in this register, debited to Accounts Payable when paid, and filed alphabetically for permanent reference. Each invoice is responsibly approved (like a voucher) before entry; and a check in payment is audited by a responsible employee before being passed to an officer for his signature.

The disadvantages of the voucher system are, briefly, these:

1. The voucher register is a somewhat cumbersome book of original entry for the handling of
   a) Corrections of original entries,
   b) Purchases returns and allowances, and
   c) Installment payments or other payments on account.
2. With no subsidiary ledger, the reference value of creditors' accounts is lost.
3. With numerically filed vouchers, the invoices for a particular creditor are not available as a group.

Vouchers Payable on the Balance Sheet

Although the Vouchers Payable account may appear as a current liability of the same name on the balance sheet, it is usual practice to call this liability "Accounts Payable" on the balance sheet.

Installing a Voucher System

This may be accomplished in either of two ways:

1. Debit all bills on the books, when paid, to Accounts Payable.

Each new bill received is put through the regular system of voucher routine. These bills, when paid, are debited to Vouchers Payable.

Under this procedure full employment of the voucher system is delayed until the old accounts payable are completely eliminated. The change-over is gradual.

2. Prepare a voucher for each unpaid bill on the books. Enter these vouchers in the voucher register. These vouchers are distributed into the miscellaneous column of the voucher register and there debited to Accounts Payable. This debit cancels the credit balance in the Accounts Payable account. *All* bills, when paid, are debited to Vouchers Payable.

This method effects an immediate change-over to the voucher system.

Petty Cash

IMPREST SYSTEM OF PETTY CASH Most businesses object to the issuance of vouchers and checks for insignificant or "petty" expenditures. In order to avoid this they establish a small cash fund out of which petty expenditures are paid in coin and currency. A petty cash fund, under the imprest system, would operate in the following manner:

July 1	Petty Cash	100.00	
	Voucher Payable		100.00
	To record voucher for the establishment of a petty cash fund, $100.00.		
	Vouchers Payable	100.00	
	Cash		100.00
	To record check to pay petty cash voucher, Vo. # ___.		

During the month of July, minor expense bills were paid in cash from the petty cash fund. Each disbursement of petty cash was supported by a receipt, petty cash voucher, or other memorandum evidencing the propriety of the payment.

The disbursements of petty cash may be recorded in a memorandum petty cash payments book, one form of which is illustrated on page 450.

At the end of the month of July, the disbursements of petty cash are summarized as follows:

$20.34	Postage
44.83	Freight and express bills
5.00	Scotch Tape
$70.17	

After the disbursements of petty cash for the month have been responsibly audited and approved, the petty cash fund can be reimbursed for disbursements made. To do this, a check is drawn in favor of the custodian of petty cash. The entries are

July 31	Freight In	44.83	
	General Expense	5.00	
	Postage	20.34	
	Vouchers Payable		70.17
	To record voucher for expenditures made from petty cash during the month of July.		

	Vouchers Payable	70.17	
	Cash		70.17
	To record payment of petty cash voucher.		

One check and one voucher thus cover many small disbursements. It will be noticed that the summarized expense accounts responsible for the diminution of petty cash are debited in recording the replenishment of the fund. They are debited because they are the expenses which make the general cash disbursement necessary.

The petty cash fund should at least be replenished on the last day of each month in order to place the disbursements of petty cash in the accounts of the proper month. It should be understood, however, that replenishment may be made at any time the petty cash fund runs low. Too frequent replenishment may be avoided by having the petty cash fund established at an amount which is commensurate with the ordinary needs of the business in question.

It is not to be inferred from the above discussion that the imprest system of petty cash is limited to businesses which use the voucher system. Where the voucher register is not used and where disbursements are distributed to accounts from the cash payments book, the imprest system of petty cash would operate as follows (using the same data as before):

July 1	Petty Cash	100.00	
	Cash		100.00
	To establish petty cash fund of $100.00.		
31	Freight In	44.83	
	General Expense	5.00	
	Postage	20.34	
	Cash		70.17
	To reimburse the petty cash fund for payments made during the month of July.		

Under either method of accounting, the balance of the Petty Cash account—under the imprest system—will not change unless the amount of the petty cash fund is actually increased to more than $100.00 or reduced to a value below $100.00.

NONIMPREST SYSTEM OF PETTY CASH Under the nonimprest system of handling petty cash, the Petty Cash account is debited for *all* cash placed into the petty cash fund and is credited for *all* disbursements of petty cash. Checks to replenish the petty cash fund are for round amounts rather than for amounts covering specific vouchers. The summary of disbursements of petty cash is recorded in the journal at least on the last day of each month; or, in lieu of this entry, postings may be made direct from the petty cash payments book (see page 450). Under this method of accounting for petty cash, it is obvious that there will be frequent changes in the balance of the

PETTY CASH PAYMENTS BOOK

From _____ To _____

DATE	PAYEE	EXPLANATION	AMOUNT OF PAYMENT	FREIGHT IN	GENERAL EXPENSE	OFFICE SUPPLIES	POSTAGE	MISCELLANEOUS	
								Amount	*Account*

Petty Cash account in the general ledger. Under the nonimprest system of handling petty cash, the entries (using the same data as before) would be

July 1	Petty Cash	100.00	
	Vouchers Payable		100.00
	To record voucher for the establishment of a petty cash fund, $100.00.		
	Vouchers Payable	100.00	
	Cash		100.00
	To record check to pay petty cash voucher, Vo. # __.		
July 31	Freight In	44.83	
	General Expense	5.00	
	Postage	20.34	
	Petty Cash		70.17
	To record disbursements of petty cash in July.		
	Petty Cash	70.00	
	Vouchers Payable		70.00
	To record voucher for replenishment of petty cash fund.		
	Vouchers Payable	70.00	
	Cash		70.00
	To record payment of petty cash voucher.		

When these entries have been posted, the balance of the Petty Cash account will be $99.83.

SUMMARY As a general rule, the imprest system of petty cash is to be preferred over the nonimprest or round-amounts system for handling petty cash.

PROBLEMS

Problem 21–1. The Union Sales Company began business on December 1, 19__. The voucher register was one of its books of original entry and contained columns for the following:

Date	Purchases
In Favor Of	Freight In
Voucher No.	Miscellaneous Sales Expense
Date Paid	Miscellaneous General Expense
Check No.	Utilities Expense
Vouchers Payable	Sundry

The condensed transactions of the company for the month of December were as follows:

December

1 Sold 1,000 shares of no-par capital stock (entire authorized issue) for cash, $101,874.00.
2 Paid rent for December to Perry Realty Company, $500.00.
3 Bought merchandise on account from Hale & Company, $8,746.00. Paid Southern Railway for freight on this purchase, $111.00.

5 Gave Lee R. Hancock, salesman, a travel advance of $500.00 cash.
6 Purchased office fixtures and equipment on account from Kline & Dameron, Inc., $3,784.00.
7 A bill for advertising in the *Daily News* is paid, $604.00.
8 Bought office supplies on account from Dewey & Wilkie, Inc., $129.00. (Debit Miscellaneous General Expense.)
10 Bought merchandise on account from A. J. Hardin, $6,480.00. Paid Southern Railway for freight on this purchase, $48.00.
11 An air-conditioning unit is purchased from York & Co. for cash, $1,850.00. Paid Southern Railway for freight, $70.00; and paid York & Co. for installation charges, $80.00.
12 Bought merchandise on account from L. J. Reed & Company, $14,050.00. Paid Southern Railway for freight on this purchase, $174.00.
14 Returned $746.00 of the merchandise purchased on December 3 from Hale & Company.
15 Established a petty cash fund of $100.00. Drew check in favor of Elmo S. Treize, cashier.
17 Gave Kline & Dameron, Inc., a check for $1,784.00 as part payment of bill of December 6.
18 A bill from the Otis Elevator Company for its monthly service charge is received, $25.00.
19 Bought merchandise on account from the Charles A. Burton Co., $12,801.00.
20 Paid the L. J. Reed Company for bill of December 12, $14,050.00, less 2% cash discount.
21 Gave a 10-day note in favor of Hale & Company in payment of balance due on bill of December 3, $8,000.00.
22 Bought merchandise on account from Hale & Company, $7,410.00.
24 A credit memorandum is received from the Charles A. Burton Co. to apply on bill of December 19, $301.00.
26 Reimbursed petty cash for postage, $50.00.
27 Bill of the Bell Telephone Company for December is received, $30.00.
28 Bought merchandise on account from the L. J. Reed Company, $11,026.00. Paid Southern Railway for freight on this purchase, $99.00. Freight terms on this purchase were f.o.b. destination.
29 A bill for gas, electricity, and other utility services is received from Southern Public Service Corporation, $204.00.
31 Paid note payable of December 21, $8,000.00.
Sales on account for December amounted to $45,000.00. Collections on accounts receivable amounted to $20,000.00.
The payroll for December was sales salaries, $3,000.00; general salaries, $5,000.00. After deduction of $160.00 for social security taxes and $1,200.00 for income taxes withheld, the payroll was paid by drawing one check for $6,640.00 in favor of Elmo S. Treize, cashier. The check was cashed at the bank, and employees were paid currency and coin in payroll envelopes.
Social security taxes on the payroll, chargeable to the employer, total $400.00. These taxes are due for payment in January.

Required

1. Enter the above transactions in books of original entry, post to appropriate T accounts, and take a trial balance.
2. Statement of income for the month of December, 19__. Merchandise inventory, December 31, 19__, estimated $32,000.00. For the purpose of this problem depreciation expense and income taxes may be disregarded.
3. Balance sheet, December 31, 19__. Support the balance sheet with a schedule showing the unpaid vouchers payable.

Problem 21–2. The following books of original entry are to be used in the business of Henry J. Monroe, Inc.:

Cash receipts book — Sales book
Check register — Voucher register
Journal

The voucher register will have distributive columns for

Purchases
Freight In
Advertising
Sales Salaries
General Expense
Office Supplies
Postage
Miscellaneous

The general ledger accounts to be opened are

Cash
Accounts Receivable
Inventory
Automobiles
Allowance for Depreciation—Automobiles
Fixtures and Equipment
Allowance for Depreciation—Fixtures and Equipment
Vouchers Payable
Notes Payable
Withholding Income Taxes Payable
Social Security Taxes Payable
Common Stock
Retained Income
Sales
Returned Sales and Allowances
Sales Discounts
Purchases
Purchases Discounts
Freight In
Advertising Expense
Automobile Expense
Depreciation Expense—Automobiles
Sales Salaries
Traveling Expense
Depreciation Expense—Fixtures and Equipment
General Expense
General Salaries
Office Supplies Expense
Postage
Rent Expense
Stationery and Printing

A subsidiary ledger for accounts receivable will be carried.

Unless otherwise specified, merchandise transactions are due net on the 10th day of the month following date of sale or purchase.

The following transactions are to be recorded in the books of Henry J. Monroe, Inc.:

January

2 All the authorized 1,000 shares of no-par common stock were issued to Henry J. Monroe and his associates for cash, $25,000.00; merchandise inventory, $5,000.00

Paid rent for January to M. C. Millian, $500.00.

3 Purchased merchandise from Frank & Company, Inc., $3,200.00.
Purchased fixtures and equipment from the General Office Equipment Company, $3,000.00, payable net on March 10, 19__.

4 Purchased office supplies on account from Howell's, Inc., $285.00.
Postage stamps are purchased for cash, $50.00.

5 Purchased merchandise from The Taylor Company, $4,000.00, 3/10, n/30.
Telegrams are sent to a selected list of prospective customers; paid Western Union Telegraph Company, $110.00. Debit Advertising Expense.
A bill is received from the Quality Printers, Inc., for printing, $200.00.
Purchased a Lincoln car, a special job for the needs of the business, from the Detroit-Lincoln Company, price, $4,700.00, payable $1,700.00 cash, the balance in four monthly payments.

6 Sale to Lancaster & Son, $8,000.00 3/10, 2/20, n/60.
Bill is received from Business Conditions, Inc., for its service for one year, $150.00.

8 Merchandise purchase from Henry E. Skaggs, $5,000.00, 2/10, n/30.
Paid Grace Steamship Company for freight on above invoice, $110.00.

9 Paid Quality Printers, Inc., bill of January 5, $200.00.

10 Purchased merchandise from The Taylor Company, $3,800.00.
Paid the Darby Transfer Company for freight and cartage on the Taylor merchandise, $87.00
Telephone bill is received $20.00.
Paid bill of Business Conditions, Inc., $150.00.

11 Merchandise purchase from Ray & Ray, Inc., $4,000.00.

12 Paid The Taylor Company, $4,000.00, less 3%, for bill of January 5.

15 Purchased merchandise from Davis & Son, $6,000.00.
Paid Grace Steamship Company for freight on above two purchases, $490.00.

16 Merchandise is purchased from the Asiatic Importers' Agency under terms of sight draft bill of lading $2,900.00, which was paid..

17 Sale of merchandise to Chester & Company, Inc., $11,000.00, 2/10, n/30.

18 Paid Henry E. Skaggs for bill of January 8. The bill was paid without deduction for cash discount.

19 Cash is received from Lancaster & Son, $8,000.00, less 2%, for invoice of January 6.

20 Bill is received for advertising in *Vogue Buyers' Journal*, $1,500.00.
Accepted a 10-day draft, dated today, in favor of Davis & Son, $6,000.00, covering purchase of January 15.

22 Sales to Central Trading Company, $7,000.00, and to Chester & Company, Inc., $4,000.00.

23 A purchase credit memorandum, dated January 22, is received from Ray & Ray, Inc., $1,700.00.

24 Purchased merchandise from Frank & Company, $4,000.00, 2/10, n/30.
Sale on account to H. J. Glenn, $10,000.00.

25 Cash is received from Chester & Company, Inc., $11,000.00 less 2%, in payment of invoice of January 17.

26 A credit memorandum, dated January 20, is received from Henry E. Skaggs for $100.00 representing cash discount which we failed to deduct in our check of January 18.

27 Office supplies are purchased on account from Howell's Inc., $115.00.
Paid Frank & Company, $4,000.00 less 2%, for bill of January 24.

29 Issued credit memorandum in favor of Lancaster & Son for merchandise returned, $2,000.00. A check is issued in payment of this credit memorandum, less a cash discount deduction of 2%.

30 The Davis & Son draft of January 20 is paid, $6,000.00.
Paid The Taylor Company bill of January 10, $3,800.00.

31 A bill is received from the Standard Garage for gasoline, oil, and sundry items, $65.00.
Traveling expenses of salesmen are paid (seven checks for $100.00, $120.00, $130.00, $140.00, $150.00, $160.00, and $200.00, respectively), $1,000.00. The payroll for January is paid:

Sales Salaries		$3,000.00
General Salaries		1,000.00
		$4,000.00
Less Withholding income taxes	$562.00	
Withholding social security taxes (O.A.S.I.)	80.00	642.00
		$3,358.00

Required

1. Trial balance of the general ledger, January 31, 19__.
2. Statement of income for the month ended January 31, 19__. Inventory, January 31, 19__, $11,004.00. Annual depreciation rates: automobile, 20%; fixtures and equipment, 10%. Accrued social security taxes on employer, $200.00. Income taxes estimated, $1,133.00.
3. Balance sheet, January 31, 19__. This balance sheet should be accompanied by schedules for accounts receivable and vouchers payable.

Problem 21–3. A machine is carried on the books of a business at a cost of $10,300.00 and an allowance for depreciation of $7,000.00. The machine is traded in for $2,600.00 on the cash purchase of a larger and improved model costing $15,000.00. The purchase was made from Hoost & Co., Inc.

How should this purchase be recorded in the voucher register?

Problem 21–4. On March 1, 19__, a petty cash fund of $200.00 was established on the books of the Van Cleve Belting Company. The fund was to be operated under the imprest system. On March 31, 19__, the petty cashier reported the following petty cash disbursements for the month:

Freight in	$ 34.73
Miscellaneous expense	26.16
Postage	75.00
Traveling expense	5.44
	$141.33

Required

1. What entry or entries should be made to replenish the petty cash fund? (Assume that the voucher system is in use.)
2. If an additional check were issued in order to increase the amount of the petty cash fund by $50.00, what entry or entries should be made?

Problem 21–5. On February 28, 19__, the petty cash fund of the Ames Corporation consisted of vouchers and cash as follows:

Vouchers:	
Carfare and taxi fare for cashier	$ 7.80
Freight-in bills	63.74
Postage	25.00
Ten sets of office keys	12.00
Tickets for Chamber of Commerce luncheon	5.00
	$113.54
Coin	6.46
Currency	80.00
	$200.00

Required

Under the imprest system what entry or entries should be made to reimburse the petty cash fund? A voucher register is not maintained.

Problem 21–6. A petty cash fund of $200.00 is established. The fund is stolen. The fund is re-established at $100.00. What entries should be made to record these transactions? The imprest system for handling petty cash and a voucher register are in use.

Problem 21–7. On December 31, 19__, a count of the petty cash fund of the Tile-On Corporation revealed the following values:

Coin	$ 10.85
Currency	200.00
Express and freight bills paid	36.30
Postage stamps	15.68
Receipt covering payment made to a cash customer for merchandise returned	12.17
Receipt covering a donation made to the Red Cross	25.00
	$300.00

Required

1. What entry should be made to reimburse the petty cash fund, December 31, 19__? The imprest system of petty cash and a voucher register are in use.
2. What entry should be made if the petty cash fund were reimbursed with a check for $100.00 under the nonimprest or round-amounts system of handling petty cash (see page 449)?

Problem 21–8. On July 1, 19__, a company established a petty cash fund of $100.00. Disbursements from this fund during the month of July were as follows:

Vouchers:	
Telegram	$ 3.00
Freight bill (on purchases)	8.72
Postage	10.00
Office supplies	3.40
Express (on purchases)	4.10
Carfare	4.00
Freight bill (on purchases)	7.87
12 rolls crepe-paper streamers for window display purposes	2.40
Traveling expense	5.00
Postage due on incoming mail	.32
Freight bill (on purchases)	6.62
Carfare	2.00
Postage	10.00
Donation	10.00
Freight bill (on purchases)	5.98
Placards for advertising department	5.00
Telegram	2.50
	$90.91

Required

1. Entries to establish the petty cash fund on July 1.
2. Entry to reimburse the fund on July 31. The imprest system of petty cash and a voucher register are in use.

Problem 21–9. The condensed balance sheet of Allen & Bishop on December 31, 19__, was

Cash	$ 99,840.00	Vouchers Payable	$124,200.00
Petty Cash	1,000.00	J. B. Allen, Capital	585,480.00
Noncash Assets	799,160.00	R. C. Bishop, Capital	190,320.00
	$900,000.00		$900,000.00

You find that the petty cash fund actually consists of freight-in bills on merchandise, $380.00; miscellaneous expense bills, $160.00; receipts for postage purchases, $200.00; vouchers for traveling expenses, $60.00; and coins and currency, $200.00.

The partners admit H. F. Cline to a 1/5 interest in the business (capital and profits) by a cash investment of $225,000.00. Allen and Bishop are to share the remaining profits in their old profit and loss ratios, 60% and 40%. Total capital of the new partnership is to be $1,000,000.00.

Required

Balance sheet of Allen, Bishop, and Cline as of the beginning of business, January 1, 19__.

Chapter 22 MANUFACTURING OPERATIONS (PERIODIC INVENTORY)

Introduction

A trading or merchandising business, like a grocery, drug, appliance, or department store, sells essentially the same product that it buys. Its merchandise is purchased ready for resale. A manufacturing business, on the other hand, must *manufacture* the product which it offers for sale.

To the latter type of business, manufacturing costs are of prime importance. The control of business operations is rendered conspicuously insecure without the information which accounts for manufacturing costs provide. Full knowledge of manufacturing costs is an essential prerequisite to intelligent and efficient managerial control of manufacturing operations. "Without cost data the financial control is inadequate and insecure, production control is unintelligent, and market operations lack one of their most important guides."[1]

Elements of Manufacturing Costs

Manufacturing costs are represented by three elements: direct (or raw) materials, direct labor, and manufacturing expenses.

Direct (or raw) materials include "those materials which enter directly into the manufacture of the product so that they can be plainly identified with it; such materials can be treated as a direct cost of the product, and the amount chargeable to the product for them is easily ascertainable. Materials which are used in small quantities only, so that the precise quantity used in any one article would be somewhat difficult to measure, are often not regarded as direct material costs, because the computation of the amount of cost would be more trouble than it is worth."[2]

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[1] T. H. Sanders, *Cost Accounting for Control* (2d ed.; New York: McGraw-Hill Book Company, Inc., 1934), p. 3.

[2] *Ibid.*, p. 57.

Direct labor is factory labor which can be traced directly to the product and the cost of which labor it is worth while to determine. Direct labor may be hand labor or that expended with the aid of machines.

Manufacturing expenses are all costs of manufacture other than direct materials and direct labor.

Accounting for Manufacturing Operations

In so far as *inventories* are concerned, two methods of accounting are in general use. In the first method, the inventory accounts of a manufacturing business are brought up to date—at the end of the accounting year—so as to reflect the accounting value of a physical inventory taken as of the date of the end-of-the-year balance sheet. This plan, the method of "periodic inventory," is the familiar one used by merchandising (i.e., nonmanufacturing) businesses generally. It is the method which has been used, without exception, in this text thus far. In the second method, the inventory accounts of a manufacturing business are kept up to date throughout the accounting year by recording all movements of goods in and out of stock. This plan is commonly called the method of "perpetual inventory." Periodically, the book value of an inventory maintained under the method of perpetual inventory should be proved by an actual physical inventory.

In place of the single inventory account which is usual for a merchandising business, a manufacturing business—operating under either periodic or perpetual inventory—will generally have three inventories:

1. Raw Materials. Raw materials are direct materials as defined on page 458.

2. Work in Process. This is the inventory of partly manufactured goods, i.e., those goods which are still in the manufacturing process.

3. Finished Goods. These are manufactured goods, finished and ready for sale to customers.

This chapter will discuss manufacturing accounting as maintained under the method of periodic inventory. Manufacturing accounting as maintained under the method of perpetual inventory will be discussed in Chapter 23.

Manufacturing Accounting under the Method of "Periodic Inventory"

The method of periodic inventory, when used by manufacturing businesses, is used primarily by small manufacturing businesses and by those businesses which manufacture a standard type of product under relatively simple conditions of manufacturing.

Manufacturing accounting under the method of "periodic inventory" is probably best described by

illustrative entries which emphasize, particularly, the recording of cost information (see pages 460 ff.);
illustrative financial statements (see pages 468–469); and
an illustrative manufacturing work sheet (see pages 466–467).

The following entries are representative illustrative entries. The accounts and values used relate to the business of the Conant Manufacturing Company whose financial statements appear on pages 468–469.

To record purchases of raw materials and their payment:

Purchases	22,000.00	
Vouchers Payable		22,000.00
To record purchases of raw materials on account.		
Vouchers Payable	xxx xx	
Cash		xxx xx
To record payment of Vo. # —, —, —, and —.		

To record a factory payroll and its payment:

Direct Labor	31,000.00	
Factory Repairs	400.00	
Heat, Light, and Power	1,100.00	
Indirect Labor	9,000.00	
Miscellaneous Factory Expense	500.00	
Vouchers Payable		33,000.00
Vouchers Payable		8,200.00
Vouchers Payable		800.00
To record liability for factory payroll; and the distribution of this payroll, $42,000.00, to cost accounts. (*Note:* The first voucher, $33,000.00, represents the actual amount of payroll cash to be disbursed to employees; the second voucher is for withholding income taxes payable, $8,200.00; and the third voucher is for withholding social security taxes [O.A.S.I.][3] payable, $800.00.)		
Vouchers Payable	42,000.00	
Cash		42,000.00
To record payment of Vo. # —, —, and —.		

To record miscellaneous manufacturing expense bills and their payment:

Factory Repairs	1,000.00	
Factory Supplies	1,200.00	
Heat, Light, and Power	3,200.00	
Insurance Expense	600.00	
Miscellaneous Factory Expense	1,600.00	
Property Taxes	2,000.00	
Vouchers Payable		9,600.00
To record bills received (and approved) for various manufacturing expenses.		
Vouchers Payable	xxx xx	
Cash		xxx xx
To record payment of Vo. $ —, —, —, and —.		

[3] The federal government's Old-Age and Survivors Insurance program.

To record miscellaneous selling expense bills and their payment:

Advertising Expense	3,000.00	
Delivery Expense	2,800.00	
Insurance Expense	200.00	
Miscellaneous Selling Expense	2,000.00	
Traveling Expense	4,000.00	
Vouchers Payable		12,000.00
To record bills received (and approved) for various selling expenses.		
Vouchers Payable	xxx xx	
Cash		xxx xx
To record payment of Vo. # __, __, __, and __.		

To record miscellaneous general expense bills and their payment:

Miscellaneous Expense	1,800.00	
Office Supplies	1,000.00	
Vouchers Payable		2,800.00
To record bills received (and approved) for various general expenses.		
Vouchers Payable	xxx xx	
Cash		xxx xx
To record payment of Vo. # __, __, __, and __.		

To record a nonfactory payroll and its payment:

Sales Salaries	16,000.00	
General Salaries	14,000.00	
Vouchers Payable		23,000.00
Vouchers Payable		6,500.00
Vouchers Payable		500.00
To record liability for nonfactory payroll. (*Note:* The first voucher, $23,000.00, represents the actual amount of payroll cash to be disbursed to employees; the second voucher is for withholding income taxes payable, $6,500.00; and the third voucher is for withholding social security taxes [O.A.S.I.] payable.)		
Vouchers Payable	30,000.00	
Cash		30,000.00
To record payment of Vo. # __, __, and __.		

Before giving effect to *adjusting* entries, a trial balance of the general ledger should be taken. The trial balance of the Conant Manufacturing Company appears in the first pair of columns of the manufacturing work sheet on page 466.

After the work sheet has been completed and the financial statements prepared (see pages 468–469), adjusting and closing entries would be placed on the books as follows:

Adjusting and Closing Entries

Depreciation Expense—Building	1,500.00	
Depreciation Expense—Machinery and Equipment	2,400.00	
Depreciation Expense—Tools	500.00	
Allowance for Depreciation—Building		1,500.00
Allowance for Depreciation—Machinery and Equipment		2,400.00
Tools		500.00

To record depreciation expense for 19__ on factory fixed assets: building, 5%; machinery and equipment, 10%; tools, 25%.

Depreciation Expense—Office Equipment	200.00	
Allowance for Depreciation—Office Equipment		200.00

To record depreciation expense for 19__ on nonfactory fixed assets, 10%.

Payroll Taxes (factory)	2,000.00	
Payroll Taxes (selling)	800.00	
Payroll Taxes (general)	700.00	
Vouchers Payable		3,500.00

To record payroll taxes levied on employer:[4]

	Factory	*Selling*	*General*
Direct and indirect labor:			
O.A.S.I.: 2% × $40,000.00	$ 800.00		
Unemployment: 3% × $40,000.00	1200.00		
	$2000.00		
Sales salaries:			
O.A.S.I.: 2% × $16,000.00 =	$320.00		
Unemployment: 3% × $16,000,00 =	480.00		
	$800.00		
General salaries:			
O.A.S.I.: 2% × $14,000.00 =		$280.00	
Unemployment: 3% × $14,000.00 =		420.00	
		$700.00	

Manufacturing	12,000.00	
Raw Materials		12,000.00

To transfer beginning inventory, January 1, 19__, of raw materials to the Manufacturing account.

Note: The Manufacturing account is an account whose function is that of gathering *all* manufacturing costs into *one* account.

Manufacturing	21,000.00	
Purchases Discounts	1,000.00	
Purchases		22,000.00

To transfer net cost of raw materials purchased to the Manufacturing account.

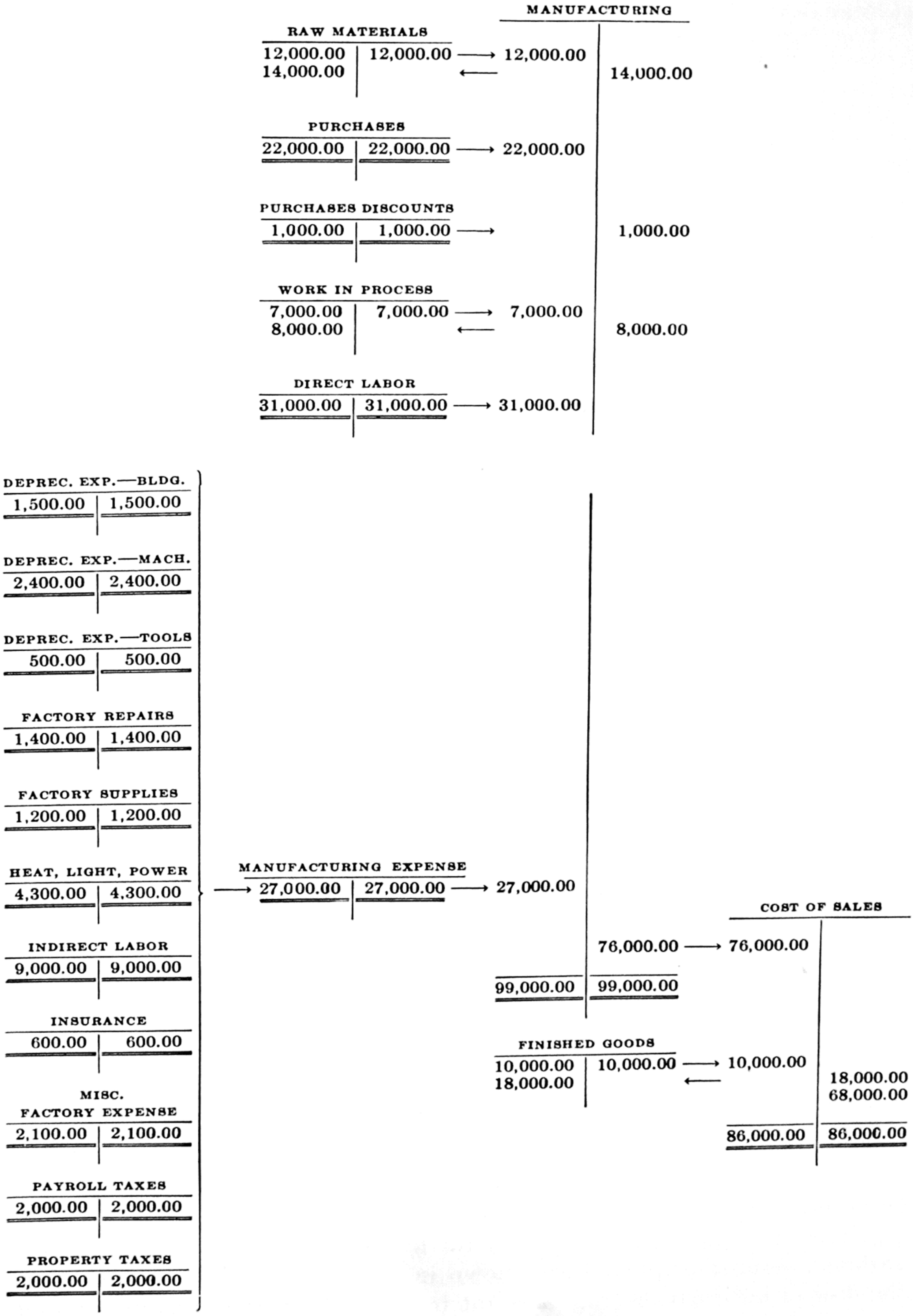
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[4] Payroll taxes are described in detail, page 609, under the section titled Social Security Taxes. The letters F.I.C.A., which mean Federal Insurance Contributions Act, are often used in place of O.A.S.I.

Raw Materials	14,000.00	
Manufacturing		14,000.00
To record new inventory of raw materials, December 31, 19__.		
Manufacturing	7,000.00	
Work in Process		7,000.00
To transfer beginning inventory, January 1, 19__, of work in process to the Manufacturing account.		
Manufacturing Expense	27,000.00	
Depreciation Expense—Building		1,500.00
Depreciation Expense—Machinery and Equipment		2,400.00
Depreciation Expense—Tools		500.00
Factory Repairs		1,400.00
Factory Supplies		1,200.00
Heat, Light, and Power		4,300.00
Indirect Labor		9,000.00
Insurance Expense		600.00
Miscellaneous Factory Expense		2,100.00
Payroll Taxes		2,000.00
Property Taxes		2,000.00
To close individual manufacturing expenses into the summary account, Manufacturing Expense.		
Manufacturing	58,000.00	
Direct Labor		31,000.00
Manufacturing Expense		27,000.00
To transfer balances of latter two accounts to the Manufacturing account.		
Work in Process	8,000.00	
Manufacturing		8,000.00
To record new inventory of work in process, December 31, 19__.		
Cost of Sales	10,000.00	
Finished Goods		10,000.00
To transfer beginning inventory of finished goods to the Cost of of Sales account.		
Cost of Sales	76,000.00	
Manufacturing		76,000.00
To transfer the balance of the Manufacturing account to the Cost of Sales account. The balance of $76,000.00 represents the cost of the finished goods manufactured during the year.		
Finished Goods	18,000.00	
Cost of Sales		18,000.00
To record new inventory of finished goods, December 31, 19__.		
Profit and Loss	68,000.00	
Cost of Sales		68,000.00
To transfer cost of merchandise sold during 19__ to the Profit and Loss account.		

From this point on, the accounting entries are similar to those used by an ordinary merchandising business.

The manufacturing entries set forth above and the functions of the various accounts employed are shown in a diagrammatic presentation of the flow of information from account to account. In the diagram on page


MANUFACTURING
RAW MATERIALS
12,000.00 | 12,000.00 → 12,000.00
14,000.00 | ← 14,000.00
PURCHASES
22,000.00 | 22,000.00 → 22,000.00
PURCHASES DISCOUNTS
1,000.00 | 1,000.00 → 1,000.00
WORK IN PROCESS
7,000.00 | 7,000.00 → 7,000.00
8,000.00 | ← 8,000.00
DIRECT LABOR
31,000.00 | 31,000.00 → 31,000.00
DEPREC. EXP.—BLDG.
1,500.00 | 1,500.00
DEPREC. EXP.—MACH.
2,400.00 | 2,400.00
DEPREC. EXP.—TOOLS
500.00 | 500.00
FACTORY REPAIRS
1,400.00 | 1,400.00
FACTORY SUPPLIES
1,200.00 | 1,200.00
HEAT, LIGHT, POWER
4,300.00 | 4,300.00
INDIRECT LABOR
9,000.00 | 9,000.00
INSURANCE
600.00 | 600.00
MISC. FACTORY EXPENSE
2,100.00 | 2,100.00
PAYROLL TAXES
2,000.00 | 2,000.00
PROPERTY TAXES
2,000.00 | 2,000.00
MANUFACTURING EXPENSE
27,000.00 | 27,000.00 → 27,000.00
76,000.00 → 76,000.00
99,000.00 | 99,000.00
COST OF SALES
FINISHED GOODS
10,000.00 | 10,000.00 → 10,000.00
18,000.00 | ← 18,000.00
68,000.00
86,000.00 | 86,000.00

464 the balances of the several accounts illustrated are transferred to the account, or accounts, to which the arrows point.

Work Sheet

The work sheet for a manufacturing business operating under the method of periodic inventory differs from the conventional work sheet in only one essential respect: the addition of two columns to care for all elements of manufacturing cost. These columns contain the accounting information later to be found in the Manufacturing account on the books.

In the illustrative work sheet on pages 466–467, the debit balance of the manufacturing columns, $76,000.00, represents the *cost of goods manufactured* during the year ended December 31, 19__. This balance is transferred to the debit Cost of Sales column.

The debit balance of the Cost of Sales columns, $68,000.00, is transferred to the debit Profit and Loss column.

The credit balance of the Profit and Loss columns, $15,000.00, representing the net income of the year, is transferred to the credit balance sheet column as an addition to Retained Income.

In the illustrative work sheet on page 466, the manner in which the new inventories are recorded should be carefully noted. The *new* inventory of raw materials, $14,000.00, is recorded by a

DEBIT in the balance sheet column, and a
CREDIT in the manufacturing column.

The *new* inventory of work in process, $8,000.00, is recorded by a

DEBIT in the balance sheet column, and a
CREDIT in the manufacturing column.

The *new* inventory of finished goods, $18,000.00, is recorded by a

DEBIT in the balance sheet column, and a
CREDIT in the cost of sales column.

ALTERNATIVE METHOD Another way of handling the new inventories would have been to place the values for these inventories on the lines below the total of the trial balances.

Financial Statements

The financial statements of the Conant Manufacturing Company, prepared from the work sheet on pages 466–467, are shown on pages 468–469.

Conant Manu

WORK SHEET,

	TRIAL BALANCE		ADJUSTMENTS		TRIAL BALANCE AFTER ADJUSTMENT	
Cash	35,000.00				35,000.00	
Accounts Receivable	37,500.00				37,500.00	
Finished Goods	10,000.00				10,000.00	
Work in Process	7,000.00				7,000.00	
Raw Materials	12,000.00				12,000.00	
Building	30,000.00				30,000.00	
Allowance for Depreciation—Building		3,000.00		(A) 1,500.00		4,500.00
Machinery and Equipment	24,000.00				24,000.00	
Allwce. for Deprec.—Mach. & Equip.		4,800.00		(B) 2,400.00		7,200.00
Tools	2,500.00			(C) 500.00	2,000.00	
Office Equipment	2,000.00				2,000.00	
Allowance for Depreciation—Office Equipment		400.00		(D) 200.00		600.00
Land	2,800.00				2,800.00	
Vouchers Payable		16,500.00		(E) 3,500.00		20,000.00
Income Taxes Payable				(F) 15,000.00		15,000.00
Common Stock		100,000.00				100,000.00
Retained Income		11,000.00				11,000.00
Sales		148,000.00				148,000.00
Sales Discounts	3,000.00				3,000.00	
Purchases	22,000.00				22,000.00	
Purchases Discounts		1,000.00				1,000.00
Direct Labor	31,000.00				31,000.00	
Depreciation Expense—Building			(A) 1,500.00		1,500.00	
Deprec. Expense—Mach. & Equip.			(B) 2,400.00		2,400.00	
Depreciation Expense—Tools			(C) 500.00		500.00	
Factory Repairs	1,400.00				1,400.00	
Factory Supplies	1,200.00				1,200.00	
Heat, Light, and Power	4,300.00				4,300.00	
Indirect Labor	9,000.00				9,000.00	
Insurance Expense	600.00				600.00	
Miscellaneous Factory Expense	2,100.00				2,100.00	
Payroll Taxes			(E) 2,000.00		2,000.00	
Property Taxes	2,000.00				2,000.00	
Advertising Expense	3,000.00				3,000.00	
Delivery Expense	2,800.00				2,800.00	
Insurance Expense	200.00				200.00	
Miscellaneous Selling Expense	2,500.00				2,500.00	
Payroll Taxes			(E) 800.00		800.00	
Sales Salaries	16,000.00				16,000.00	
Traveling Expense	4,000.00				4,000.00	
Depreciation Expense—Office Equipment			(D) 200.00		200.00	
General Salaries	14,000.00				14,000.00	
Miscellaneous Expense	1,800.00				1,800.00	
Office Supplies	1,000.00				1,000.00	
Payroll Taxes			(E) 700.00		700.00	
Provision for Income Taxes			(F) 15,000.00		15,000.00	
	284,700.00	284,700.00			307,300.00	307,300.00
COST OF FINISHED GOODS MANUFACTURED—TO COST OF SALES						
COST OF SALES—TO PROFIT AND LOSS						
NET INCOME—TO RETAINED INCOME						

facturing Company

DECEMBER 31, 19__

MANUFACTURING		COST OF SALES		PROFIT AND LOSS		BALANCE SHEET	
						35,000.00	
						37,500.00	
		10,000.00	18,000.00			18,000.00	
7,000.00	8,000.00					8,000.00	
12,000.00	14,000.00					14,000.00	
						30,000.00	
							4,500.00
						24,000.00	
							7,200.00
						2,000.00	
						2,000.00	
							600.00
						2,800.00	
							20,000.00
							15,000.00
							100,000.00
							11,000.00
22,000.00				3,000.00	148,000.00		
	1,000.00						
31,000.00							
1,500.00							
2,400.00							
500.00							
1,400.00							
1,200.00							
4,300.00							
9,000.00							
600.00							
2,100.00							
2,000.00							
2,000.00							
				3,000.00			
				2,800.00			
				200.00			
				2,500.00			
				800.00			
				16,000.00			
				4,000.00			
				200.00			
				14,000.00			
				1,800.00			
				1,000.00			
				700.00			
				15,000.00			
. . . . .	76,000.00	76,000.00					
99,000.00	99,000.00						
. . . . .	. . . . .	. . . . .	68,000.00	68,000.00			
		86,000.00	86,000.00				
. . . . .	. . . . .	. . . . .	. . . . .	15,000.00			15,000.00
				148,000.00	148,000.00	173,300.00	173,300.00

The statement of income of the Conant Manufacturing is shown in detail. Alternatively, the statement of income might have been prepared by showing cost of sales as simply $68,000.00, all details of this value being omitted from the statement proper. The details of cost of goods manufactured and sold would be shown in a separate schedule supporting the statement of income.

Conant Manufacturing Company

STATEMENT OF INCOME FOR THE YEAR ENDED DECEMBER 31, 19__

Sales				$148,000.00
Less Sales Discounts				3,000.00
				$145,000.00
Cost of Sales:				
Finished Goods, December 31, 19__ (previous year)			$10,000.00	
Cost of Finished Goods Manufactured in 19__ (current year):				
Work in Process, December 31, 19__		$ 7,000.00		
Raw Materials Consumed:				
Raw Materials, December 31, 19__	$12,000.00			
Purchases	$22,000.00			
Less Purchases Discounts	1,000.00	21,000.00		
		$33,000.00		
Raw Materials, December 31, 19__	14,000.00	19,000.00		
Direct Labor		31,000.00		
Manufacturing Expenses:				
Depreciation Expense—Building	$ 1,500.00			
Depreciation Expense—Machinery and Equipment	2,400.00			
Depreciation Expense—Tools	500.00			
Factory Repairs	1,400.00			
Factory Supplies	1,200.00			
Heat, Light, and Power	4,300.00			
Indirect Labor	9,000.00			
Insurance Expense	600.00			
Miscellaneous Factory Expense	2,100.00			
Payroll Taxes	2,000.00			
Property Taxes	2,000.00	27,000.00		
		$84,000.00		
Work in Process, December 31, 19__		8,000.00	76,000.00	
			$86,000.00	
Finished Goods, December 31, 19__			18,000.00	68,000.00
Gross Profit				$ 77,000.00
Selling Expenses:				
Advertising Expense			$ 3,000.00	
Delivery Expense			2,800.00	
Insurance Expense			200.00	
Miscellaneous Selling Expense			2,500.00	
Payroll Taxes			800.00	
Sales Salaries			16,000.00	
Traveling Expense			4,000.00	
			$29,300.00	
General Expenses:				
Depreciation Expense—Office Equipment		$ 200.00		
General Salaries		14,000.00		
Miscellaneous Expense		1,800.00		
Office Supplies		1,000.00		
Payroll Taxes		700.00	17,700.00	47.000.00
Net Profit from Operations				$ 30,000.00
Provision for Income Taxes				15,000.00
Net Income				$ 15,000.00

Conant Manufacturing Company

BALANCE SHEET, DECEMBER 31, 19__

Assets

Current Assets:			
Cash			$ 35,000.00
Accounts Receivable			37,500.00
Finished Goods			18,000.00
Work in Process			8,000.00
Raw Materials			14,000.00
			$112,500.00
Fixed Assets:			
	Cost	*Allowance for Depreciation*	*Net Book Value*	
Building	$30,000.00	$ 4,500.00	$ 25,500.00	
Machinery	24,000.00	7,200.00	16,800.00	
Tools	2,000.00		2,000.00	
Office Equipment	2,000.00	600.00	1,400.00	
Land	2,800.00		2,800.00	
	$60,800.00	$12,300.00	$ 48,500.00	48,500.00
				$161,000.00

Liabilities and Capital

Current Liabilities:			
Vouchers Payable			$ 20,000.00
Income Taxes Payable			15,000.00
			$ 35,000.00
Capital:			
Common Stock, $100.00 par		$100,000.00	
Retained Income		26,000.00	126,000.00
			$161,000.00

Commentary

The "fairness" of statements of income and of balance sheets for manufacturing businesses may be subject to some question, especially when the inventory values contained in these statements are substantial. The inventories of work in process and finished goods at balance sheet dates generally involve *estimates* as to their accounting values. Even though physical counts of these inventories may have been carefully made, the valuations to be placed on these inventories are often something of an accounting problem because of the difficulty of fairly determining the elements of cost involved for the physical units on hand, individually as well as collectively.

With respect to work in process and finished goods, for example, these questions may be asked:

How much *raw materials* do these inventories contain?
How much *direct labor* do these inventories contain?
How much *manufacturing expense* do these inventories contain?

It should be obvious that, in arriving at satisfactory accounting answers to these questions, the opportunity for error is considerable.

The fairness of any statement of income for a manufacturing business, then, is no better than the accounting fairness of the inventory values used in determining the net income of the business for which values of inventories are significant.

PROBLEMS

Problem 22–1. The accounts of the Wilson Manufacturing Company were maintained according to the plan of periodic inventory. The condensed balance sheet of the company on December 31, 1957, was as follows:

Assets			*Equities*	
Cash		$ 30,000.00	Vouchers Payable	$ 47,000.00
Accounts Receivable		25,000.00		
Finished Goods		25,000.00	Common Stock	
Work in Process		23,000.00	$100.00 par	100,000.00
Raw Materials		15,000.00	Retained Income	25,000.00
Factory Fixed Assets	$60,000.00			
Less Allowance for Depreciation	6,000.00	54,000.00		
		$172,000.00		$172,000.00

The condensed transactions of the company for the year 1958 were these:

1. Finished goods were sold on account, $154,000.00.
2. Collections on accounts receivable, $141,000.00.
3. Purchased raw materials on account, $66,000.00.
4. Vouchers payable paid, $73,000.00.
5. The payroll for the year amounted to $44,000.00 consisting of direct labor, $30,000.00, and indirect labor, $14,000.00. Withheld from this payroll were income taxes, $10,000.00; and social security taxes (O.A.S.I.), $800.00. The net amount due on the payroll was paid in cash. All of the withholding taxes were paid by checks in favor of the District Director of Internal Revenue.
6. Miscellaneous general factory expenses incurred and vouchers paid, $8,000.00.
7. Depreciation expense on factory fixed assets amounted to $6,000.00 for the year.
8. General nonfactory expenses incurred and vouchers paid, $29,000.00.

Required

1. Record these transactions in appropriate T accounts and prepare a trial balance, December 31, 1958.
2. Statement of income for the year ended December 31, 1958. Inventories, December 31, 1958: finished goods $34,000.00; work in process, $16,000.00; raw materials, $22,000.00.
3. Balance sheet, December 31, 1958.

Problem 22–2. The condensed trial balance of the Union Manufacturing Company on December 31, 19__, was

Cash	$ 40.000.00	
Accounts Receivable	31,000.00	
Finished Goods	30,000.00	
Work in Process	25,000.00	
Raw Materials	19,000.00	
Plant and Equipment	70,000.00	
Allowance for Depreciation		$ 10,000.00
Land	10,000.00	
Vouchers Payable		50,000.00
Common Stock, $100.00 par		100,000.00
Retained Income		65,000.00
	$225,000.00	$225,000.00

The company operated under the plan of periodic inventory. Its condensed transactions for the next 12 months were as follows:

1. Sold finished goods on account, $200,000.00.
2. Collections on accounts receivable, $170,000.00.
3. Purchased raw materials on account, $80,000.00.
4. Cash disbursed to creditors in payment of vouchers payable for raw material purchased, $70,000.00.
5. The payroll for the year amounted to $55,000.00, direct labor being $40,000.00 and indirect labor, $15,000.00. Withheld from this payroll were income taxes, $12,000.00, social security taxes (O.A.S.I.), $1,000.00. The net amount due to employees on the payroll was paid in cash. All of the withholding taxes were promptly discharged by payments to the District Director of Internal Revenue.
6. Miscellaneous general factory expenses were paid, $10,000.00.
7. Depreciation expense on plant and equipment amounted to $7,000.00 for the year.
8. General expenses were paid, $35,000.00.

Required

1. Record the transactions above in appropriate T accounts and prepare a trial balance.
2. Statement of income for the year ended December 31, 19__. Inventories, December 31, 1958: finished goods, $40,000.00; work in process, $20,000.00; raw materials, $26,000.00.
3. Balance sheet, December 31, 19__.

Problem 22–3. The condensed trial balance of the Robbins Manufacturing Company on December 31, 19__, was

Cash	$ 40,000.00	
Accounts Receivable	30,000.00	
Finished Goods	24,000.00	
Work in Process	40,000.00	
Raw Materials	20,000.00	
Factory Fixed Assets	40,000.00	
Allowance for Depreciation		$ 10,000.00
Vouchers Payable		22,000.00
Common Stock, $100.00 par		100,000.00
Earned Surplus		30,000.00
Sales		240,000.00
Purchases	60,000.00	
Direct Labor	65,000.00	
Indirect Labor	15,000.00	
Miscellaneous Manufacturing Expense	10,000.00	
Depreciation Expense—Factory	4,000.00	
Selling Expense	30,000.00	
General Expense	24,000.00	
	$402,000.00	$402,000.00

Required

1. Manufacturing work sheet. Inventories, December 31, 19__, were: finished goods, $30,000.00; work in process, $20,000.00; and raw materials, $32,000.00.
2. Statement of income for the year ended December 31, 19__.
3. Balance sheet, December 31, 19__.

Problem 22–4. The condensed and adjusted trial balance of the Mann Manufacturing Company on December 31, 19__, was

Cash	$ 40,000.00	
Accounts Receivable	25,000.00	
Finished Goods	26,000.00	
Work in Process	23,000.00	
Raw Materials	22,000.00	
Factory Fixed Assets	40,000.00	
Allowance for Depreciation—Factory Fixed Assets		$ 12,000.00
Nonfactory Fixed Assets	10,000.00	
Allowance for Depreciation—Nonfactory Fixed Assets		3,000.00
Vouchers Payable		30,000.00
Common Stock, $100.00 par		100,000.00
Retained Income		30,000.00
Sales		261,000.00
Purchases	80,000.00	
Direct Labor	75,000.00	
Indirect Labor	20,000.00	
Miscellaneous Manufacturing Expense	11,000.00	
Depreciation Expense—Factory	4,000.00	
Selling Expenses	33,000.00	
General Expenses	26,000.00	
Depreciation Expense (general)	1,000.00	
	$436,000.00	$436,000.00

Required

1. Manufacturing work sheet. Inventories, December 31, 19__: finished goods, $30,000.00; work in process, $37,000.00; and raw materials, $35,000.00.
2. Statement of income for the year ended December 31, 19__.
3. Balance sheet, December 31, 19__.

Problem 22–5. The trial balance of the Climax Manufacturing Company on December 31, 19__, was

Cash	$135,000.00	
Accounts Receivable	80,000.00	
Finished Goods	42,000.00	
Work in Process	30,000.00	
Raw Materials	37,000.00	
Factory Equipment	70,000.00	
Allowance for Depreciation—Factory Equipment		$ 30,000.00
Office Equipment	14,000.00	
Allowance for Depreciation—Office Equipment		4,000.00
Vouchers Payable		50,000.00
Common Stock, 69,000 shares no par		150,984.00
Dividend Payable in Common Stock, 23,000 shares		50,328.00
Earned Surplus		64,688.00
Sales		300,000.00
Purchases	82,000.00	
Purchases Discounts		4,000.00
Freight In	5,000.00	
Direct Labor	60,000.00	
Depreciation Expense—Factory Equipment	6,000.00	
General Factory Expense	10,000.00	
Indirect Labor	17,000.00	
Selling Expenses	40,000.00	
General Office Expense	25,000.00	
Depreciation Expense—Office Equipment	1,000.00	
	$654,000.00	$654,000.00

Required

1. Statement of income for the year 19__. Inventories, December 31, 19__: finished goods, $40,000.00; work in process, $15,000.00; raw materials, $30,000.00.
2. Balance sheet, December 31, 19__.

Problem 22–6. Following is the trial balance of the Concord Manufacturing Company on December 31, 19__:

Cash	$ 192,000.00
Accounts Receivable	260,000.00
Finished Goods	212,000.00
Work in Process	100,000.00
Raw Materials	60,000.00
Marketable Securities	244,000.00
Office Equipment	78,000.00

Allowance for Depreciation—Office Equipment		$ 30,000.00
Factory Equipment	200,000.00	
Allowance for Depreciation—Factory Equipment		40,000.00
Dies, Patterns, Jigs	100,000.00	
Goodwill	250,000.00	
Notes Payable		100,000.00
Accounts Payable		300,000.00
Common Stock, 100,000 shares no-par		1,024,000.00
Earned Surplus		200,000.00
Sales		1,270,000.00
Purchases	400,000.00	
Freight In	13,000.00	
Direct Labor	257,000.00	
Depreciation Expense—Factory Equipment	20,000.00	
Factory Rent	100,000.00	
Insurance Expense—Factory Assets	4,000.00	
Miscellaneous Factory Expense	246,000.00	
Advertising Expense	45,000.00	
Miscellaneous Selling Expense	16,000.00	
Sales Salaries	50,000.00	
Traveling Expense	25,000.00	
Depreciation Expense—Office Equipment	7,000.00	
General Office Expense	42,000.00	
Office Salaries	43,000.00	
	$2,964,000.00	$2,964,000.00

Required

1. Manufacturing work sheet. New inventories: raw materials, $52,000.00; work in process, $150,000.00; finished goods, $118,000.00.
2. Statement of income for the year ended December 31, 19__.
3. Balance sheet, December 31, 19__.

Problem 22–7. Following is the trial balance of the Case Manufacturing Company on December 31, 19__:

Cash	$ 70,000.00	
Accounts Receivable	100,000.00	
Finished Goods	50,000.00	
Work in Process	10,000.00	
Raw Materials	20,000.00	
Machinery and Equipment	100,000.00	
Allowance for Depreciation—Machinery and Equipment		$ 30,000.00
Delivery Equipment	20,000.00	
Allowance for Depreciation—Delivery Equipment		10,000.00
Office Equipment	12,000.00	
Allowance for Depreciation—Office Equipment		5,000.00
Accounts Payable		60,000.00
Notes Payable		10,000.00
Dividends Payable		30,000.00
Common Stock, $100.00 par		200,000.00
Retained Income		24,000.00
Sales		557,000.00

Sales Discounts	4,000.00	
Purchases	200,000.00	
Purchases Discounts		3,000.00
Freight In	5,000.00	
Direct Labor	60,000.00	
Depreciation Expense—Machinery and Equipment	10,000.00	
Indirect Labor	80,000.00	
Machinery Repairs	12,000.00	
Small Tools Expense	3,000.00	
Advertising	30,000.00	
Depreciation Expense—Delivery Equipment	5,000.00	
Miscellaneous Expense—Delivery Equipment	3,000.00	
Sales Salaries	50,000.00	
Traveling Expense	20,000.00	
Depreciation Expense—Office Equipment	1,000.00	
General Office Expense	20,000.00	
Office Salaries	34,000.00	
Property Taxes (to be apportioned: 60% factory, 20% selling, and 20% general)	10,000.00	
	$929,000.00	$929,000.00

Required

1. Manufacturing work sheet. New inventories: finished goods, $70,000.00; work in process, $21,000.00; and raw materials, $25,000.00.
2. Statement of income for the year ended December 31, 19__.
3. Balance sheet, December 31, 19__.

Problem 22–8. The condensed trial balance of the Malone Manufacturing Company on December 31, 19__, was

Cash	$ 78,000.00	
Notes Receivable	30,000.00	
Notes Receivable Discounted		$ 10,000.00
Accounts Receivable	83,000.00	
Finished Goods	32,000.00	
Work in Process	30,000.00	
Raw Materials	20,000.00	
Factory Equipment	84,000.00	
Allowance for Depreciation—Factory Equipment		8,000.00
Office Equipment	10,000.00	
Allowance for Depreciation—Office Equipment		1,000.00
Vouchers Payable		45,000.00
Common Stock, $100.00 par		200,000.00
Retained Income		100,000.00
Sales		200,000.00
Purchases	82,000.00	
Freight In	5,000.00	
Direct Labor	45,000.00	
Indirect Labor	11,000.00	
General Factory Expense	10,000.00	
Advertising	10,000.00	
Sales Salaries	22,000.00	
General Salaries	12,000.00	
	$564,000.00	$564,000.00

Additional Information

1. Depreciation expense for the year: factory equipment, $8,000.00; office equipment, $1,000.00.
2. Accrued payroll: direct labor, $5,000.00; indirect labor, $3,000.00; and general salaries, $4,000.00. (Credit Vouchers Payable.)
3. Prepaid advertising, December 31, 19__, $3,000.00.
4. Inventories, December 31, 19__: finished goods, $44,000.00; work in process, $15,000.00; raw materials, $28,000.00.

Required

1. Manufacturing work sheet.
2. Statement of income for the year ended December 31, 19__.
3. Balance sheet, December 31, 19__.

Problem 22–9. The trial balance of the James Manufacturing Company on December 31, 19__, was

Cash	$ 200,000.00	
Accounts Receivable	192,000.00	
Finished Goods	120,000.00	
Work in Process	200,000.00	
Raw Materials	100,000.00	
Plant and Property	360,000.00	
Allowance for Depreciation—Plant and Property		$ 60,000.00
Salesmen's Automobiles	80,000.00	
Allowance for Depreciation—Salesmen's Automobiles		40,000.00
Vouchers Payable		468,000.00
Dividend Payable in Common Stock		100,000.00
Common Stock, $100.00 par		400,000.00
Retained Income		220,000.00
Sales		1,200,000.00
Purchases	400,000.00	
Freight In	20,000.00	
Direct Labor	200,000.00	
Indirect Labor	86,000.00	
Heat, Light and Power (Factory)	30,000.00	
Repairs and Maintenance (Factory)	24,000.00	
Property Taxes (Factory)	4,000.00	
Depreciation Expense—Plant and Property	36,000.00	
Depreciation Expense (Salesmen's Automobiles)	20,000.00	
Advertising Expense	48,000.00	
Salesmen's Salaries	80,000.00	
Traveling Expense	40,000.00	
General Expense	64,000.00	
General Salaries	184,000.00	
	$2,488,000.00	$2,488.000.00

The following data are not reflected in the trial balance:

1. Bad debts for the year are estimated at $10,000.00. Accounts receivable known to be uncollectible should be written off, $4,000.00.

2. There is on hand an unrecorded advertising bill, $12,000.00.
3. Income taxes for the year are estimated at $70,000.00.

Required

1. Manufacturing work sheet. Inventories, December 31, 19__: finished goods, $248,000.00; work in process, $240,000.00; raw materials, $160,000.00.
2. Statement of income for the year ended December 31, 19__.
3. Balance sheet, December 31, 19__.

Problem 22–10. On December 31, 19__, the trial balance, before adjustment, of the Indiana Sales Company was

Cash	$ 201,500.00	
Accounts Receivable	120,000.00	
Finished Goods	60,000.00	
Work in Process	40,000.00	
Raw Materials	70,000.00	
Prepaid Insurance	2,500.00	
Building	100,000.00	
Allowance for Depreciation—Building		$ 20,000.00
Machinery	90,000.00	
Allowance for Depreciation—Machinery		15,000.00
Office Equipment	10,000.00	
Allowance for Depreciation—Office Equipment		1,000.00
Land	10,000.00	
Accounts Payable		50,000.00
Common Stock, $100.00 par		500,000.00
Earned Surplus		100,000.00
Sales		540,000.00
Sales Discounts	7,000.00	
Purchases	300,000.00	
Purchases Discounts		5,000.00
Freight In	5,000.00	
Direct Labor	100,000.00	
Heat, Light, and Power	25,000.00	
Indirect Labor	20,000.00	
Miscellaneous Factory Supplies	6,000.00	
Machinery Repairs	8,000.00	
Advertising	3,000.00	
Sales Salaries	20,000.00	
Traveling Expense	2,000.00	
General Expense	7,000.00	
Office Salaries	24,000.00	
	$1,231,000.00	$1,231,000.00

Additional Information

1. Prepaid expenses, December 31, 19__, were prepaid insurance, $500.00; factory supplies, $1,000.00.
2. Annual depreciation rates: buildings, 5%; machinery, 10%; and office equipment 10%.

3. $1,000.00 of the Heat, Light, and Power account is to be handled as a general nonfactory expense.
4. Accrued property taxes, December 31, 19__, amounted to $4,000.00. Of this amount, 1/4 was chargeable as a general expense, and 3/4 as a factory expense.
5. Income taxes for the year ended December 31, 19__, were estimated at $40,000.00.

Required

1. Manufacturing work sheet. Inventories, December 31, 19__: finished goods, $62,000.00; work in process, $90,000.00; raw materials, $100,000.00.
2. Statement of income for the year ended December 31, 19__.
3. Balance sheet, December 31, 19__.

Problem 22–11. The trial balance of the Maine Manufacturing Company, December 31, 19__, was

Cash	$ 50,000.00	
Accounts Receivable	225,000.00	
Finished Goods	85,000.00	
Work in Process	24,000.00	
Raw Materials	28,000.00	
Office Equipment	20,000.00	
Allowance for Depreciation—Office Equipment		$ 6,000.00
Machinery and Equipment	136,000.00	
Allowance for Depreciation—Machinery and Equipment		22,000.00
Factory Building	250,000.00	
Allowance for Depreciation—Factory Building		74,000.00
Land	30,000.00	
Accounts Payable		161,000.00
Common Stock, $100.00 par		400,000.00
Treasury Stock, 400 shares at cost	40,000.00	
Retained Income		118,000.00
Sales		908,000.00
Sales Discounts	8,000.00	
Purchases	203,000.00	
Purchases Discounts		6,000.00
Direct Labor	200,000.00	
Indirect Labor	80,000.00	
Factory Repairs	26,000.00	
Miscellaneous Expense (factory)	56,000.00	
Advertising Expense	50,000.00	
Sales Salaries	51,000.00	
Traveling Expense	26,000.00	
General Office Salaries	40,000.00	
Miscellaneous Expense (nonfactory)	34,000.00	
Payroll Taxes (80% factory, 10% selling, 10% general)	16,000.00	
Property Taxes (80% factory, 20% general)	14,000.00	
Interest Expense	3,000.00	
	$1,695,000.00	$1,695,000.00

The following additional information should be considered preliminary to the preparation of financial statements:

1. Annual depreciation rates: factory building, 4%, machinery and equipment, 12½%, office equipment, 10%.
2. Estimated uncollectible accounts receivable, $20,000.00.
3. A 5% cash dividend has been declared to stock of record December 31, 19__, payable January 20, 19__.
4. Income taxes for the year were estimated at $30,000.00.

Required

1. Manufacturing work sheet. Inventories, December 31, 19__: finished goods, $88,000.00, work in process, $10,000.00, raw materials, $42,000.00.

2. Statement of income for the year ended December 31, 19__.

3. Balance sheet, December 31, 19__.

4. From the standpoint of management, in what respects would it be desirable for the financial statements of the next fiscal year to be improved over those of 19__?

Chapter 23 MANUFACTURING OPERATIONS (PERPETUAL INVENTORY)

Manufacturing Accounting under the Plan of Perpetual Inventory

From the standpoint of the management of a manufacturing business, the method of *periodic* inventory often has important weaknesses:

1. At any given date the amount of inventory that *should be* on hand is not known.
2. No system is provided for the adequate *control* of inventory values.
3. No system is provided for the allocation of raw-material costs to products, operations, or departments.
4. It is difficult to establish the cost of each kind or type of product manufactured.
5. The valuation of inventories of partly manufactured goods and finished goods is difficult. For accounting purposes, estimates must usually be relied upon.
6. Monthly financial statements are likely to be less reliable and serviceable because of the likelihood that estimated values for month-end inventory values will have to be used. Monthly physical inventories are likely to be too costly in terms of both the time and the cost involved in the procedures of taking inventory.

The plan of *perpetual* inventory is intended to circumvent these weaknesses. By using this method, management significantly strengthens its control over the manufacturing operations of a business.

Manufacturing accounting under the method of perpetual inventory will be discussed in this chapter. Concurrently the discussion will include accounting procedures for the recording of the elements of cost: raw materials, direct labor, and manufacturing expense. And it will include an introduction to *job order* cost accounting and *process* cost accounting.

The *job order* classification generally represents the manufacture of *unlike* units, batches, or lots, each unit, batch, or lot being governed by distinctive specifications recorded on the order authorizing the manufac-

ture of the units, batches, or lots in question. Each unit, batch, or lot generally represents production undertaken because a specific customer's order has been received for the production in question—a special machine or a special printing job, for example—the order involving distinctive specifications. Less frequent but not uncommon are special job orders covering the production of special equipment or machines for inventory. Job orders may also be used to ascertain the cost of plant orders, maintenance orders, special research projects, or even the construction of fixed assets. In all cases, however, the cost of each job order representing the production of a *specific* unit, batch, or lot is determined on the basis of completed production.

The *process cost* classification represents the continuous manufacture of many *like* units of production such as brick, cereal, cinder block, cement, flour, newsprint, and sugar. Production of these standard commercial products is generally a continuous process as, for example, assembly or conveyor line operations; and production is generally for inventory. Since all of the production of a business operating under *process costs* is essentially the same, costs by specific batches or lots are not needed. The cost that *is* needed is the cost and the average unit cost of all of the production of an accounting period. Unit costs for an accounting period are obtained by dividing production costs by the number of finished units (or equivalent) produced during the period.

JOB ORDER COST ACCOUNTING

Raw Materials Purchased

Raw materials are those direct materials (defined on page 458) entering directly into the manufacture of a product. The raw materials of one company may be the finished product of another. To a company manufacturing woolen cloth, raw wool would represent raw materials, and the manufactured woolen cloth would represent the finished product. To a company manufacturing men's woolen suits or women's woolen dresses, the woolen cloth would represent raw materials, and the completed suits and dresses would represent the finished product.

Under a system of perpetual inventory, all purchases of raw materials are debited to the Raw Materials inventory account from the voucher register. This account is a controlling account, the details of which are kept in a subsidiary ledger, generally called the "stores ledger." One ledger page or card of this stores ledger is kept for each kind of raw material. After it has been recorded in the voucher register, a purchase invoice for raw materials is recorded in the subsidiary raw-materials ledger. One page of this stores ledger might appear as follows:

ARTICLE _____

UNIT 1
MAXIMUM 700
MINIMUM 200

RECEIVED					ISSUED					ON HAND	
Date	Ref.	Quantity	Price	Amount	Date	Req. No.	Quantity	Price	Amount	Date	Quantity
1958					1958					1958	
Jan. 2	PO 1	1,000	50¢	500.00						Jan. 2	1,000
					Jan. 7	10	400	50¢	200.00	7	600
					14	28	410	50¢	205.00	14	190
15	PO19	400	50¢	200.00						15	590
					21	42	360	50¢	180.00	21	230
25	PO 31	500	50¢	250.00						25	730
					28	51	400	50¢	200.00	28	330
				950.00					785.00		
Feb. 1	Balance	330	50¢	165.00						Feb. 1	330

Raw Materials Used

All raw materials needed for manufacturing purposes are withdrawn from the inventory of raw materials by written requisition, properly approved. These requisitions are priced from information recorded in the stores ledger. They are then recorded by the stores keeper in a raw-materials requisition register, one form of which follows.

RAW MATERIALS REQUISITION REGISTER

DATE	REQUISITION NO.	AMOUNT	DATE	REQUISITION NO.	AMOUNT

At the end of each month, the total raw-material disbursements of the month are recorded in a formal journal entry:[1]

Work in Process	xxx xx	
Raw Materials		xxx xx
To charge Work in Process with the cost of raw materials placed into production.		

It is by these procedures, then, that the costs of raw materials used in production are determined and recorded.

During the month, the withdrawals of raw materials from stores, as evidenced by written requisitions (properly approved), will have been entered on the appropriate cards or pages of the subsidiary raw-materials ledger. After all additions and withdrawals of raw materials for a month have been recorded, each inventory card or page will represent the quantity and value of a particular kind of raw material on hand. The sum of the values remaining on these inventory cards or pages at the end of a given month should equal the balance of the Raw Materials inventory controlling account in the general ledger. The value of the inventory represented by a particular card or page will be, of course, the beginning inventory value increased or decreased by the difference between the dollar totals of the Received and Issued columns as illustrated on page 482.

Additions to inventory are generally recorded at invoice cost plus transportation. Withdrawals are recorded at actual cost on the basis of first in, first out; or they may be recorded at average cost. The average cost, when used, is generally ascertained monthly.

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[1] This entry may be made as illustrated or it can be made a part of a compound entry in which Work in Process is charged with raw materials, direct labor, and manufacturing expense—all at the same time. The compound entry on page 486 includes the entry illustrated on this page.

Factory Supplies

The system of internal control over factory supplies should be as exacting as that for raw materials. Under such a system factory supplies, as received, would be debited to Factory Supplies (an inventory account). Factory supplies would be issued on the authority of written requisitions, properly approved. At the end of each month, the total disbursements of factory supplies for the month would be recorded in a journal entry:

Factory Supplies (expense)	xxx xx	
Factory Supplies (inventory)		xxx xx
To record the cost of factory supplies placed into production.		

Labor

Through the use of a time clock, each employee prepares a "clock card" which shows his actual time "in" and "out" each day. At the end of the day, an employee's clock card will show the total time worked that day. Each employee will also prepare a time report, using one "time ticket" for each job worked upon during a day. The total of time reported on these time tickets should, of course, agree with that reported on the clock cards. One example of an employee's time report follows.

Date_____ Employee:
Name_____ No.____

Hour In_____ Hour Out_____ Elapsed Hours_____
Production Order No._____ Rate_____
Indirect Labor_____ Amount_____

Hour In_____ Hour Out_____ Elapsed Hours_____
Production Order No._____ Rate_____
Indirect Labor_____ Amount_____

Hour In_____ Hour Out_____ Elapsed Hours_____
Production Order No._____ Rate_____
Indirect Labor_____ Amount_____

Hour In_____ Hour Out_____ Elapsed Hours_____
Production Order No._____ Rate_____
Indirect Labor_____ Amount_____

Approved_____
Foreman

PAYROLL DISTRIBUTION REGISTER

Week Ended _____ 19__

EMPLOYEE NO.	WAGE	DEBIT																			
		Direct Labor										*Indirect Labor*									
		PRODUCTION ORDER NO.										ACCOUNT NO.									
1																					
2																					
3																					
4																					
5																					
6																					
7																					
8																					
9																					
10																					
TOTAL PAYROLL																					

Payroll clerks compute the elapsed time, record the rates, and compute the amounts shown on this payroll form.

The time reports of employees are summarized at the end of each payroll period in a payroll summary or payroll distribution register, one form of which is illustrated on page 485.

The totals of the several columns of the payroll distribution register provide the amount of a payroll and its distribution to cost accounts. The Direct Labor account, for example, will be debited with the sum of the totals of the "Production Order No." columns. The sum of the totals of the Indirect Labor columns, however, would not as a general rule be debited to the Indirect Labor account. The reason is that some indirect labor is chargeable to Factory Repairs, some to Heat, Light, and Power, some to Indirect Labor, some to Miscellaneous Factory Expense, and some to other accounts. Each "Account No." on the payroll distribution register represents, therefore, an account to which indirect labor is charged. In distributing the indirect labor of a payroll, the totals of the "Account No." columns will be debited to the specific accounts which these columns represent.

At the end of a payroll period, the totals of the payroll distribution register will be recorded in the voucher register. The voucher entry will be

Direct Labor	xxx xx	
Manufacturing Expenses (detailed)	xxx xx	
Vouchers Payable		xxx xx

To record factory payroll and its distribution to cost accounts. (*Note:* This credit to Vouchers Payable actually involves three vouchers, one for the actual amount of payroll cash to be disbursed, one for withholding income taxes payable, and one for withholding O.A.S.I. taxes payable.)

When the last day of the payroll period does not coincide with the last day of the accounting period, care should be taken to record and distribute the accrued payroll to the cost accounts of the current accounting period.

Work in Process

The Work in Process account is debited with *all* manufacturing costs incurred. On the books this is expressed by a summary entry made at the end of each month:

Work in Process	xxx xx	
Raw Materials[2]		xxx xx
Direct Labor		xxx xx
Manufacturing Expense Applied		xxx xx

To debit Work in Process with raw materials, direct labor, and manufacturing expense applied during the month of _____.

The amount of the credit to the Raw Materials account is the total of raw-material requisitions as recorded in the raw-materials requisition

[2] See footnote, page 483.

register for the month. The credit to Direct Labor is the amount of the debit balance in the Direct Labor account. The credit to the Manufacturing Expense Applied account is obtained in the manner described on page 489.

Work in Process is a controlling account. Supporting this account are various production or job orders, one production or job order being issued for each lot of merchandise in the process of manufacture. Each production order is charged with the costs of raw materials, direct labor, and manufacturing expense which apply to it. At the end of the month, the sum of the cumulative costs on the unfinished production orders should equal the balance of the Work in Process account in the general ledger.

One example of a production order or job cost sheet is illustrated below.

PRODUCTION ORDER

DESCRIPTION _____ NO. _____

_____ *Date*

_____ ISSUED _____ 19__

FOR _____ UNITS _____ DUE _____ 19__

COMPLETED _____ 19__

RAW MATERIALS			DIRECT LABOR			MANUFACTURING EXPENSE		
Date	*Requisition Number*	*Amount*	*Date*	*Ref.*	*Amount*	*Date*	*Rate*	*Amount*

SUMMARY: Raw Materials . . . . . $

Direct Labor . . . . . .

Manufacturing Expense . . . . . .

TOTAL COST OF THIS PRODUCTION ORDER . . . . . $

_____ units finished at unit cost of $_____

Finished Goods

During the month or other manufacturing period it is usual for certain manufacturing orders (i.e., production or job orders) to be completed. The completed production represented by these orders is an addition to the inventory of finished goods. At the end of the month a summary of completed production orders is prepared and made the basis of the following entry:

Finished Goods	xxx xx	
Work in Process		xxx xx
To transfer cost of completed production to the inventory of finished goods.		

Sometimes a special journal will be useful for recording transfers from work in process (i.e., the factory) to finished goods (i.e., the storeroom or warehouse).

The Finished Goods inventory account, like the accounts for Raw Materials and Work in Process inventories, is a controlling account. A subsidiary ledger, similar in form to that for raw materials, is maintained; one account if kept for each kind or type of finished product. Additions to the inventory of finished goods, and withdrawals, are recorded in the same way that additions and withdrawals to the inventory of raw materials are recorded. The sources of entry

for additions to inventory are completed production orders, and
for deductions from inventory, sales invoices (office copy)

After all entries have been made, each page or card represents the amount of inventory remaining on hand for the particular finished product represented by that page or card. The sum of the detailed balances on these pages or cards should equal the balance of the Finished Goods controlling account in the general ledger.

Conforming to a general principle applicable to book inventories generally, the book inventory of finished goods should be verified, at least annually, by comparing it with an actual physical inventory.

At the end of each month the finished goods which have been withdrawn from stock, and sold, are recorded by this entry:

Cost of Sales	xxx xx	
Finished Goods		xxx xx
To record cost of manufactured product sold during the month of _____.		

This entry is prepared from a summary of manufactured product sold, ruled somewhat as follows:

SUMMARY OF MANUFACTURED PRODUCT SOLD
Month of March 19 81

PRODUCTION ORDER NO.	COST	PRODUCTION ORDER NO.	COST
Kunz R.D.	Kunz R.D.	Kunz R.D.	Kunz R.D.

or it may be drawn from a special Cost of Sales column in the sales book. A Cost of Sales column means, of course, that each "office copy" of a sales invoice is individually "costed" and recorded in the following type of sales book:

SALES BOOK

DATE	INVOICE NO.	DEBIT ACCOUNT OF	L.F.	AMOUNT	COST OF SALES

Manufacturing Expense and Its Distribution

Manufacturing expenses represent all manufacturing costs except those for direct materials and direct labor. The equitable apportionment of the manufacturing expenses to the manufactured product of a business is often an accounting problem of some complexity. One widely used procedure for effecting this apportionment is the following:

1. At the beginning of an accounting period, the amounts of manufacturing expense and direct labor expected to be incurred during the period are estimated.
2. The ratio of estimated manufacturing expense to estimated direct labor is determined.
3. During the accounting period, this predetermined ratio is applied against the direct labor amount actually incurred. The product is the amount of manufacturing expense chargeable to production.

Example

If it is estimated that the total manufacturing expense for an accounting period will be $70,000.00 and that the total direct labor of the period will be $100,000.00, the estimated manufacturing expense *rate* for the period will be 70%. During the period, then, a job with an incurred direct labor cost of $8,000.00 would be charged with 70% × $8,000.00 = $5,600.00 manufacturing expense.

This method for the distribution of manufacturing expense uses a rate which is a percentage of direct labor cost. Two other common methods are dollar cost per labor-hour and dollar cost per machine-hour. There are other methods, too, for the distribution of manufacturing expense. These methods, which are beyond the province of a text on elementary accounting, are discussed in courses and texts on cost accounting. For the purpose of this book, the percentage-of-direct-labor-cost method will be considered an adequate procedure for the distribution of manufacturing expense to production.

The journal entry to record the distribution of manufacturing expense to production is

Work in Process	xxx xx	
Manufacturing Expense Applied[3]		xxx xx
To charge work in process with manufacturing expense absorbed by operations.		

The monetary value of this entry is determined by simply applying the predetermined manufacturing expense rate against the amount of direct labor incurred during the month.

This entry should be supported by a summary of the total manufacturing expense charged to production orders during the month. This summary can be simple in form:

SUMMARY OF MANUFACTURING EXPENSE DISTRIBUTED

Month of _____ 19__

PRODUCTION ORDER NO.	MANUFACTURING EXPENSE	PRODUCTION ORDER NO.	MANUFACTURING EXPENSE

If individual manufacturing expense accounts are carried in the general ledger (i.e., no controlling account is maintained for them), the *summary* account, Manufacturing Expense, will have a large credit balance until the

[3] This entry is incorporated in the compound entry on page 486.

end of the year, when the individual manufacturing expense accounts of a business will be closed to the summary account. In constructing interim financial statements throughout the year, the difference between the total of the individual manufacturing expense accounts in the ledger and the credit balance in the Manufacturing Expense account may be conveniently placed on the statement of income as other income or other expense, as the case may be. Some accountants, however, would handle these interim differences as adjustments of cost of sales or cost of goods manufactured; still other accountants would handle them as deferred items on interim balance sheets.

Unabsorbed and Overabsorbed Manufacturing Expense

At the end of an accounting period there will be a difference between the balances of the Manufacturing Expense (summary account) and the Manufacturing Expense Applied accounts. What should be done with this difference?

Example

As of January 1, 19__, the management of the Prime Manufacturing Company estimated that direct labor costs for the ensuing twelve months would amount to $100,000.00, and manufacturing expenses, $70,000.00. These estimates called for a manufacturing expense rate of 70%, i.e., a predetermined manufacturing expense rate of 70% to be used in distributing manufacturing expense to production orders.

At the end of the year 19__ it was found that direct labor actually amounted to $96,000.00, and manufacturing expense, $70,632.00. The amount of manufacturing expense applied to production during the year was therefore 70% of $96,000.00, or $67,200.00. This was recorded by the following entry:

Work in Process	67,200.00	
Manufacturing Expense Applied		67,200.00
To debit work in process with manufacturing expense applied.		

On December 31, 19__, therefore, the two manufacturing expense accounts appeared as follows:

MANUFACTURING EXPENSE	MANUFACTURING EXPENSE APPLIED
70,632.00	67,200.00

In this example the difference between the balances of the two accounts represent unabsorbed manufacturing expense. If the balance in the Manufacturing Expense Applied account had been larger than the balance in the

Manufacturing Expense account, the difference would have represented an overabsorption of manufacturing expense.

The difference of $3,432.00 between the balances of the two accounts in the example is due to the fact that the debit balance in the Manufacturing Expense account represents expenses actually incurred, whereas the credit balance in the Manufacturing Expense Applied account represents a value obtained by using a predetermined, estimated rate. Put another way, manufacturing expenses were distributed to the production of the period by using a predetermined estimated rate (based on the ratio of estimated total manufacturing expenses to estimated total direct labor) rather than by using a rate based on the ratio of total actual manufacturing expenses to total actual direct labor.

Where practicable, any unabsorbed or overabsorbed manufacturing expense should be included with the manufacturing costs of a year. However, it is not always possible to do this satisfactorily. It is upon the basis of expediency, therefore, that accountants have generally sanctioned the end-of-the-year practice of transferring any difference between the balances of the Manufacturing Expense and Manufacturing Expense Applied accounts to profit and loss

as other income or other expense; or
as an increase or decrease of the cost of goods sold for a year (as illustrated on page 496).

Accountants currently appear to favor handling unabsorbed or overabsorbed manufacturing expense as an adjustment of the value for cost of goods sold. This method is especially warranted when the greater part of a year's production of finished goods has been sold.

If the unabsorbed or overabsorbed manufacturing expense of an accounting period is a value of significant amount, the value in question should be spread over the year's manufacturing costs by apportioning it to cost of sales, finished goods, and work in process. This would be especially appropriate when the error in a predetermined manufacturing expense rate was caused by the fact that the total of actual expenses exceeded the total of estimated expenses, or vice versa; by the fact that the amounts of direct labor or manufacturing expense were wrongly estimated; or by the fact that the operations of a period were at a rate somewhat more or somewhat less than the original estimate of manufacturing activity.

However, if the amount of unabsorbed manufacturing expense for an accounting period is large because of idle plant rather than because of fundamental error present in calculating the predetermined manufacturing expense rate, the unabsorbed manufacturing expense should be handled as Idle Plant Expense in the "other expense" section of the statement of income. This treatment allows the cost of goods manufactured and the cost of goods sold to be shown at costs which are the normal or budgeted costs.

At all events any unabsorbed or overabsorbed manufacturing expense of significant amount should be explained to the satisfaction of management and, where warranted, adjustments of cost accounts made accordingly.

Illustrative Problem

Manufacturing "job order" cost accounting under the plan of perpetual inventory may be summarized by a representative set of entries emphasizing particularly the flow of cost information among the accounts. The entries below are those of the Manchester Manufacturing Company during the calendar year 1958. The statement of income of the Manchester Manufacturing Company for the year ended December 31, 1958, appears on page 496.

In this illustrative problem the Manufacturing Expense account is a controlling account.

Inventories, December 31, 1957, were finished goods, $120,000.00; work in process, $40,000.00; and raw materials, $20,000.00.

Raw Materials	123,000.00	
Vouchers Payable		123,000.00
To record purchases of direct materials, net (i.e., less purchases discounts).		
Direct Labor	100,000.00	
Manufacturing Expense (control)	30,000.00	
Vouchers Payable		130,000.00
To record liability for payroll and its distribution to cost accounts.		
Manufacturing Expense (control)	23,500.00	
Vouchers Payable		23,500.00
To record invoices received for supplies and services chargeable to manufacturing expense.		
Manufacturing Expense (control)	58,500.00	
Allowance for Depreciation—Building		7,500.00
Allowance for Depreciation—Factory Equipment		51,000.00
To record depreciation expense for 1958 on factory fixed assets.		
Depreciation Expense—Delivery Equipment	7,500.00	
Allowance for Depreciation—Delivery Equipment		7,500.00
To record depreciation expense for 1958 on delivery equipment.		
Depreciation Expense—Office Equipment	6,000.00	
Allowance for Depreciation—Office Equipment		6,000.00
To record depreciation expense for 1958 on ofice equipment.		
Vouchers Payable	806,500.00	
Cash		806,500.00
To record payment of vouchers payable.		

Work in Process	128,000.00	
Raw Materials		128,000.00
To record raw materials withdrawn from inventory for use in production.		
Work in Process	100,000.00	
Direct Labor		100,000.00
To charge production with direct labor.		
Work in Process	110,000.00	
Manufacturing Expense Applied		110,000.00
To debit Work in Process for manufacturing expense applied to production at the rate of 110% of direct labor ($100,000.00). (*Note:* This percentage represents management's predetermined estimate at the beginning of the year 1958 that $1.10 of manufacturing expense will be incurred for each $1.00 of direct labor.)		
Unabsorbed Manufacturing Expense	2,000.00	
Manufacturing Expense Applied	110,000.00	
Manufacturing Expense		112,000.00
To close latter two accounts and to record unabsorbed manufacturing expense for 1958.		
Finished Goods	328,000.00	
Work in Process		328,000.00
To record transfer of completed production to inventory of finished goods.		
Cost of Sales	363,000.00	
Finished Goods		363,000.00
To record finished goods withdrawn from inventory and sold.		
Cost of Sales	2,000.00	
Unabsorbed Manufacturing Expense		2,000.00
To transfer unabsorbed manufacturing expense to Cost of Sales.		

After the accounting transactions of the year to date have been recorded and posted, the inventory and Cost of Sales accounts—in T-account form—will be as follows:

FINISHED GOODS

1957			1958		
Dec. 31	Balance	120,000.00			363,000.00
1958		328,000.00			

WORK IN PROCESS

1957			1958		
Dec. 31	Balance	40,000.00			328,000.00
1958		128,000.00			
		100,000.00			
		110,000.00			

RAW MATERIALS

1957			1958		
Dec. 31	Balance	20,000.00			128,000.00
1958		123,000.00			

COST OF SALES

1958		363,000.00			
		2,000.00			

The balances in the inventory accounts, $85,000.00, $50,000.00, and $15,000.00, respectively, represent the accounting costs of the inventories on hand, December 31, 1958. An actual physical inventory, at cost, should agree with these values.

The *adjusted* trial balance of the Manchester Manufacturing Company, December 31, 1958, appears in the first pair of columns of the manufacturing work sheet on page 497. It should be noted that Cost of Sales is one of the accounts of this trial balance.

Note: It is possible to apply the basic pattern of perpetual (or continuous book) inventory accounting to the merchandising transactions of a trading business.[4] This practice, however, is not common.

Statement of Income

The statement of income of the Manchester Manufacturing Company, prepared from the work sheet on page 497, would be as follows:

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[4] When this is done, the merchandise accounting of a trading business would assume the following pattern:

1. At the beginning of the accounting period the balance of the Merchandise Inventory account would be the accounting cost of the merchandise actually on hand as per physical count and valuation.
2. Purchases of merchandise during the accounting period would be debited to the Merchandise Inventory account.
3. At the end of each month the balance of the Freight In account would be transferred to the Merchandise Inventory account.
4. At the end of each month the cost of merchandise sold during the month would be recorded thus:

Cost of Sales	xxx xx	
Merchandise Inventory		xxx xx

To record cost of goods sold during the month of _____.
(This value is the sum of the cost values appearing on office copies of sales invoices or the month.)

After this entry has been posted, the balance of the Merchandise Inventory account represents the cost value of the merchandise inventory on hand.

Manchester Manufacturing Company

STATEMENT OF INCOME FOR THE YEAR ENDED DECEMBER 31, 1958

Sales (*less* Returned Sales and Allowances, $20,000.00, and Sales Discounts, $5,000.00)			$600,000.00
Cost of Sales			365,000.00
Gross Profit			$235,000.00
Selling Expenses:			
Advertising Expense		$ 15,000.00	
Delivery Expense		14,000.00	
Depreciation Expense—Delivery Equipment		7,500.00	
Insurance Expense		1,000.00	
Sales Salaries		40,000.00	
Traveling Expense		20,000.00	
Miscellaneous Expense		10,000.00	
		$107,500.00	
General Expenses:			
General Salaries	$35,000.00		
Insurance Expense	200.00		
Office Supplies Expense	6,000.00		
Bad Debts Expense	3,500.00		
Depreciation Expense—Office Equipment	6,000.00		
Miscellaneous Expense	8,800.00	59,500.00	167,000.00
Net Profit from Operations			$ 68,000.00
Other Income:			
Dividend Income		$ 7,000.00	
Interest Income		5,000.00	12,000.00
			$ 80,000.00
Provision for Income Taxes			20,000.00
Net Income			$ 60,000.00

The cost of sales valuation of $365,000.00 would be detailed in a supporting schedule, thus:

Manchester Manufacturing Company

COST OF GOODS MANUFACTURED AND SOLD FOR THE YEAR ENDED DECEMBER 31, 1958

Finished Goods, December 31, 1957		$120,000.00
Cost of Goods Manufactured in 1958:		
Work in Process, December 31, 1957	$ 40,000.00	
Raw Materials Consumed	128,000.00	
Direct Labor	100,000.00	
Manufacturing Expense	110,000.00	
	$378,000.00	
Work in Process, December 31, 1958	50,000.00	328,000.00
		$448,000.00
Finished Goods, December 31, 1958		85,000.00
		$363,000.00
Add Unabsorbed Manufacturing Expense		2,000.00
		$365,000.00

Manchester Manufacturing Company

WORK SHEET FOR THE YEAR ENDED DECEMBER 31, 1958

	TRIAL BALANCE (*Adjusted*)		PROFIT AND LOSS		BALANCE SHEET	
Cash	102,000.00				102,000.00	
Accounts Receivable	100,000.00				100,000.00	
Finished Goods	85,000.00				85,000.00	
Work in Process	50,000.00				50,000.00	
Raw Materials	15,000.00				15,000.00	
Corporate Stocks and Bonds	200,000.00				200,000.00	
Building	300,000.00				300,000.00	
Allowance for Depreciation—Building		37,500.00				37,500.00
Delivery	30,000.00				30,000.00	
Allowance for Depreciation—Delivery Equipment		17,500.00				17,500.00
Factory Equipment	510,000.00				510,000.00	
Allowance for Factory Equipment		171,000.00				171,000.00
Office Equipment	60,000.00				60,000.00	
Allowance for Depreciation—Office Equipment		22,000.00				22,000.00
Land	100,000.00				100,000.00	
Vouchers Payable		80,000.00				80,000.00
Income Taxes Payable		20,000.00				20,000.00
Common Stock		1,000,000.00				1,000,000.00
Retained Income		144,000.00				144,000.00
Sales		625,000.00		625,000.00		
Returned Sales and Allowances	20,000.00		20,000.00			
Sales Discounts	5,000.00		5,000.00			
Cost of Sales	365,000.00		365,000.00			
Advertising Expense	15,000.00		15,000.00			
Delivery Expense	14,000.00		14,000.00			
Depreciation Expense—Delivery Equipment	7,500.00		7,500.00			
Insurance Expense	1,000.00		1,000.00			
Sales Salaries	40,000.00		40,000.00			
Traveling Expense	20,000.00		20,000.00			
Miscellaneous Selling Expense	10,000.00		10,000.00			
General Salaries	35,000.00		35,000.00			
Insurance Expense	200.00		200.00			
Office Supplies	6,000.00		6,000.00			
Bad Debts Expense	3,500.00		3,500.00			
Depreciation Expense—Office Equipment	6,000.00		6,000.00			
Miscellaneous General Expense	8,800.00		8,800.00			
Dividend Income		7,000.00		7,000.00		
Interest Income		5,000.00		5,000.00		
Provision for Income Taxes	20,000.00		20,000.00			
	2,129,000.00	2,129,000.00				
NET INCOME			60,000.00			60,000.00
			637,000.00	637,000.00	1,552,000.00	1,552,000.00

In the schedule of cost-of-goods-manufactured-and-sold the values for

Raw Materials Consumed,
Direct Labor, and
Manufacturing Expense

are obtained from the debit side of the Work in Process account.

PROCESS COST ACCOUNTING

Introduction

As stated on page 481, process cost accounting applies to the manufacture of a product wherein each unit of finished product is like all other units of the same class. These finished units are all produced by the same manufacturing process.

Under these conditions, it is impracticable, unrealistic, and even impossible to determine the actual cost of any specific unit of production. Because all units of the production process are alike, there is no need, in process cost accounting, to determine the cost of specific units, jobs, lots, or batches of product. Instead, the average cost of a unit of finished product is determined by dividing the production costs of an accounting period by the number of finished units produced during the period.

Since it is not necessary to determine the cost of individual "jobs," it is *not* necessary to maintain subsidiary production orders (or job cost sheets). This means that a work-in-process subsidiary ledger is *not* needed. Instead, departmental work-in-process accounts are carried in the general ledger, one work-in-process account for each department. If there are no departments, then there is but one work-in-process account. A department is a distinctive operation of the manufacturing process, an operation whose individual costs as to raw materials, direct labor, and manufacturing expense are closely watched by management. In the manufacture of bricks, for instance, the distinctive operations to produce finished bricks are as follows:

1. Mining the clay (i.e., quarrying)
2. Grinding and mixing the clay with other ingredients, and molding the wet bricks
3. Drying
4. Setting the bricks in the kiln for firing
5. Burning (i.e., kiln firing or baking)
6. Unloading and stacking the burned bricks

In a process cost accounting system, unit costs for raw materials, direct labor, and manufacturing expense are determined for each department. The determination of a departmental average unit cost requires,

obviously, the recording of the number of units processed in each department as well as the dollar cost of their processing.

Raw materials and finished goods, under process cost accounting, are handled under the same "perpetual inventory" procedures which were described for job order cost accounting (see pages 481 and 487).

The accounting procedures for the recording of the costs of raw materials, direct labor, and manufacturing expenses are about the same for both job order and process cost accounting. Since these procedures have already been described in earlier pages of this chapter, they will not be repeated here. The nominal differences involved may be briefly described:

Raw materials withdrawn from the inventory of raw materials are analyzed in terms of the departments which are to use them. Raw materials are charged to individual departments and *not* to individual jobs or production orders.

Direct labor is analyzed in terms of the departments incurring these costs. Direct labor, accordingly, is charged to individual departments.

Manufacturing expenses are recorded in individual accounts in the usual manner. They are then distributed departmentally to production. Methods of accumulating and distributing manufacturing expense are generally the same as those for job order operations. It may be observed, however, that manufacturing expenses can be accumulated and distributed by departments. The distribution of manufacturing expense to departments would then be made by using individual departmental distribution rates.

Average Unit Cost and Equivalent Production

On page 481 it was stated that, under process cost accounting, the average cost of a unit of finished product is determined by dividing the production costs of an accounting period by the number of finished units produced during the period.

The number of units produced in a period means units of completed finished product. If a department has some unfinished work on hand at the end of an accounting period, the production of finished goods for the period is

> Completed units of finished goods produced + partly finished goods (expressed in terms of finished units).

This sum is called the "equivalent production" of the period. For example, if a department produced 95,000 units of finished product during the year 1958 and, on December 31, 1958, had on hand 10,000 units of product one-half completed, the "equivalent production" of finished goods for the year 1958 would be 100,000 units, calculated as follows:

$$95{,}000 + 10{,}000 \times 1/2 = 100{,}000.00.$$

If the incurred production costs of the year were $500,000.00, the average unit cost of the year's production would be $500,000.00 ÷ 100,000.00 = $5.00. This average unit cost of $5.00 would be used for costing the completed units, i.e., 95,000 × $5.00 = $475,000.00, and for costing the incomplete units, i.e., 10,000 × 1/2 × $5.00 = $25,000.00. For balance sheet purposes, December 31, 1958, this value of $25,000.00 is the accounting value of the inventory of partly finished goods.

Illustrative Problem

Manufacturing "process" cost accounting under the plan of perpetual inventory may be described, in summary, by a representative illustrative set of entries. The entries below are those of the Wakefield Manufacturing Company. In order to facilitate study, the values used in these entries are generally the same as those used in the Manchester Manufacturing Company problem on page 493. However, there are some differences in the two illustrative problems and the two sets of illustrative entries. These differences will be noted as the entries of the two illustrative problems are studied.

The Manufacturing Expense account in this illustrative problem is a controlling account.

Inventories, December 31, 1957, were finished goods, $191,151.22; work in process, none; and raw materials, $20,000.00.

Raw Materials	123,000.00	
Vouchers Payable		123,000.00
To record purchases of direct materials, net (i.e., less purchases discounts).		
Direct Labor	100,000.00	
Manufacturing Expense (control)	30,000.00	
Vouchers Payable		130,000.00
To record liability for payroll and its distribution to cost accounts		
Manufacturing Expense (control)	23,500.00	
Vouchers Payable		23,500.00
To record invoices received for supplies and services chargeable to manufacturing expense.		
Manufacturing Expense (control)	58,500.00	
Allowance for Depreciation—Building		7,500.00
Allowance for Depreciation—Factory Equipment		51,000.00
To record depreciation expense for 19— on factory fixed assets.		
Depreciation Expense—Delivery Equipment	7,500.00	
Allowance for Depreciation—Delivery Equipment		7,500.00
To record depreciation expense for 1958 on delivery equipment.		

Depreciation Expense—Office Equipment	6,000.00	
Allowance for Depreciation—Office Equipment		6,000.00
To record depreciation expense for 1958 on office equipment.		
Vouchers Payable	806,500.00	
Cash		806,500.00
To record payment of vouchers payable.		
Work in Process, Department #1	76,000.00	
Work in Process, Department #2	35,960.00	
Work in Process, Department #3	16,040.00	
Raw Materials		128,000.00
To record raw materials withdrawn from inventory for use in production.		
Work in Process, Department #1	22,800.00	
Work in Process, Department #2	11,600.00	
Work in Process, Department #3	65,600.00	
Direct Labor		100,000.00
To charge production with direct labor.		
Work in Process, Department #1	25,080.00	
Work in Process, Department #2	12,760.00	
Work in Process, Department #3	72,160.00	
Manufacturing Expense Applied		110,000.00
To debit departmental work in process accounts for manufacturing expense applied to production at the rate of 110% of direct labor. (*Note:* this percentage represents management's predetermined estimate at the beginning of the year 1958 that $1.10 of manufacturing expense will be incurred for each $1.00 of direct labor.)		
Unabsorbed Manufacturing Expense	2,000.00	
Manufacturing Expense Applied	110,000.00	
Manufacturing Expense		112,000.00
To close latter two accounts and to record unabsorbed manufacturing expense for 1958.		

After the accounting transactions of the year to date have been recorded and posted and, assuming no beginning inventories for work in process, the three Work in Process accounts—in T-account form—will be as follows:

WORK IN PROCESS, DEPT. #1	
76,000.00	
22,800.00	
25,080.00	

WORK IN PROCESS, DEPT. #2	
35,960.00	
11,600.00	
12,760.00	

WORK IN PROCESS, DEPT. #3	
16,040.00	
65,600.00	
72,160.00	

As they stand, the three Work in Process accounts show all costs which have been incurred during 1958—raw materials, direct labor, and manufacturing expense applied. Entries are now needed to show the values—representing completed departmental production—which have been transferred from Department #1 to Department #2; from Department #2 to Depart-

ment #3; and from Department #3 to Finished Goods. It is also necessary to determine the cost of departmental work-in-process inventories, December 31, 1958. In order to frame these entries, the average unit cost of the production of each department must be determined. As stated on page 481, this unit cost is obtained by dividing the production costs of the year by the number of finished units of equivalent production for the year.

The required entries will be based on the following summary of production report:

Wakefield Manufacturing Company

SUMMARY OF PRODUCTION REPORT FOR THE YEAR 1958

Production Quantity Report (in units):

	Dept. #1	*Dept. #2*	*Dept. #3*
In process, December 31, 1957	0	0	0
Completed and transferred in 1958	68,000	44,000	40,000
Completed and on hand, December 31, 1948	0	4,000	0
In process, December 31, 1958	12,000	20,000	4,000
	80,000	68,000	44,000
Equivalent Production			
In process, December 31, 1957	0	0	0
Completed and transferred in 1958	68,000	44,000	40,000
Completed and on hand, December 31, 1958	0	4,000	0
In process, December 31, 1958:			
12,000 units 2/3 completed	8,000		
20,000 units, 1/2 completed		10,000	
4,000 units, 1/4 completed			1,000
	76,000	58,000	41,000

Production Cost Report:

	DEPT. #1		DEPT. #2		DEPT. #3	
	Amount	*Per Unit*	*Amount*	*Per Unit*	*Amount*	*Per Unit*
Cost from preceding department			$110,840.00	$1.63	$117,480.00	$2.67
Cost in this department:						
Raw materials	$ 76,000.00	$1.00	$ 35,960 00	$0.62	$ 16,040.00	$0.39122
Direct labor	22,800.00	0 30	11,600.00	0.20	65,600.00	1.60
Manufacturing expense	25,080.00	0.33	12,760.00	0.22	72,160.00	1.76
	$123,880.00	$1.63	$ 60,320.00	$1.04	$153,800.00	$3.75122
Cumulative cost			$171,160.00	$2.67	$271,280.00	$6.42122
Transferred to next department	$110,840.00		$117,480.00			
Transferred to finished goods					$256,848.78	
Completed and on hand, December 31, 1958			10,680.00			
Work in process, December 31, 1958	13,040.00		43,000.00		14,431.22	
	$123,880.00		$171,160.00		$271,280.00	

From this summary of production report, the values transferred from one department to succeeding departments and to Finished Goods are recorded in the following entries:

Work in Process, Department #2	110,840.00	
Work in Process, Department #1		110,840.00
To record the cost of 68,000 units transferred to Department #2 in 1958.		
Work in Process, Department #3	117,480.00	
Work in Process, Department #2		117,480.00
To record the cost of 44,000 units transferred to Department #3 in 1958.		
Finished Goods	256,848.78	
Work in Process, Department #3		256,848.78
To record the cost of 40,000 units transferred to Finished Goods.		

(*Note:* Entries like these three entries are usually made at the end of each month using monthly summary of production reports.)

After these entries have been posted, the three Work in Process accounts—in T-account form—will be as follows:

WORK IN PROCESS, DEPT. #1		WORK IN PROCESS, DEPT. #2		WORK IN PROCESS, DEPT. #3	
76,000.00	110,840.00	35,960.00	117,480.00	16,040.00	256,848.78
22,800.00		11,600.00		65,600.00	
25,080.00		12,760.00		72,160.00	
		110,840.00		117,480.00	

The balances in these work-in-process accounts are $13,040.00, $53,680.00, and $14,431.22, respectively. These balances agree, as they should with the work-in process valuations, December 31, 1958, shown in the summary of production report on page 502.

The cost of goods sold during the year 1958 would be recorded by the following entry:

Cost of Sales	363,000.00	
Finished Goods		363,000.00
To record finished goods withdrawn from inventory and sold.		

The unabsorbed manufacturing expense of the year would be disposed of by the following entry:

Cost of Sales	2,000.00	
Unabsorbed Manufacturing Expense		2,000.00
To transfer unabsorbed manufacturing expense to Cost of Sales.		

After these entries have been posted, the Finished Goods, Raw Materials, and Cost of Sales Accounts—T-account form—would be as follows:

FINISHED GOODS		RAW MATERIALS		COST OF SALES	
191,151.22	363,000.00	20,000.00	128,000.00	363,000.00	
256,848.78		123,000.00		2,000.00	

Statement of Income

The statement of income of the Wakefield Manufacturing Company, prepared from the work sheet on page 505, would be as follows:

Wakefield Manufacturing Company

STATEMENT OF INCOME FOR THE YEAR ENDED DECEMBER 31, 1958

Sales (*less* Returned Sales and Allowances, $20,000.00, and Sales Discounts, $5,000.00)			$600,000.00
Cost of Sales			365,000.00
Gross Profit			$235,000.00
Selling Expenses:			
Advertising Expense		$ 15,000.00	
Delivery Expense		14,000.00	
Depreciation Expense—Delivery Equipment		7,500.00	
Insurance Expense		1,000.00	
Sales Salaries		40,000.00	
Traveling Expense		20,000.00	
Miscellaneous Expense		10,000.00	
		$107,500.00	
General Expenses:			
General Salaries	$35,000.00		
Insurance Expense	200.00		
Office Supplies Expense	6,000.00		
Bad Debts Expense	3,500.00		
Depreciation Expense—Office Equipment	6,000.00		
Miscellaneous Expense	8,800.00	59,500.00	167,000.00
Net Profit from Operations			$ 68,000.00
Other Income:			
Dividend Income		$ 7,000.00	
Interest Income		5,000.00	12,000.00
			$ 80,000.00
Provision for Income Taxes			20,000.00
Net Income			$ 60,000.00

Conclusion

Only an introduction to process cost accounting has been attempted in the discussion of pages 498–505. For this reason there has been no discussion of such factors as refinements of equivalent production statistics, lost and spoiled units, joint products, by-products, and miscellaneous methods for the distribution of manufacturing expense to production. These factors, among others, are materials beyond the compass of a text on elementary accounting; they are properly part of the content of standard texts and courses in cost accounting.

Wakefield Manufacturing Company

WORK SHEET, YEAR ENDED DECEMBER 31, 1958

	TRIAL BALANCE (*Adjusted*)		PROFIT AND LOSS		BALANCE SHEET	
Cash	81,528.78				81,528.78	
Accounts Receivable	100,000.00				100,000.00	
Finished Goods	85,000.00				85,000.00	
Work in Process, Department #1	13,040.00				13,040.00	
Work in Process, Department #2	43,000.00				43,000.00	
Work in Process, Department #3	14,431.22				14,431.22	
Raw Materials	15,000.00				15,000.00	
Corporate Stocks and Bonds	200,000.00				200,000.00	
Building	300,000.00				300,000.00	
Allowance for Depreciation—Building		37,500.00				37,500.00
Delivery Equipment	30,000.00				30,000.00	
Allowance for Depreciation—Delivery Equipment		17,500.00				17,500.00
Factory Equipment	510,000.00				510,000.00	
Allowance for Depreciation—Factory Equipment		171,000.00				171,000.00
Office Equipment	60,000.00				60,000.00	
Allowance for Depreciation—Office Equipment		22,000.00				22,000.00
Land	100,000.00				100,000.00	
Vouchers Payable		80,000.00				80,000.00
Income Taxes Payable		20,000.00				20,000.00
Common Stock		1,000,000.00				1,000,000.00
Retained Income		144,000.00				144,000.00
Sales		625,000.00		625,000.00		
Returned Sales and Allowances	20,000.00		20,000.00			
Sales Discounts	5,000.00		5,000.00			
Cost of Sales	365,000.00		365,000.00			
Advertising	15,000.00		15,000.00			
Delivery Expense	14,000.00		14,000.00			
Depreciation Expense—Delivery Equipment	7,500.00		7,500.00			
Insurance Expense	1,000.00		1,000.00			
Sales Salaries	40,000.00		40,000.00			
Traveling Expense	20,000.00		20,000.00			
Miscellaneous Selling Expense	10,000.00		10,000.00			
General Salaries	35,000.00		35,000.00			
Insurance Expense	200.00		200.00			
Office Supplies	6,000.00		6,000.00			
Bad Debts Expense	3,500.00		3,500.00			
Depreciation Expense—Office Equipment	6,000.00		6,000.00			
Miscellaneous General Expense	8,800.00		8,800.00			
Dividend Income		7,000.00		7,000.00		
Interest Income		5,000.00		5,000.00		
Provision for Income Taxes	20,000.00		20,000.00			
	2,129,000.00	2,129,000.00				
Net Income to Retained Income			60,000.00			60,000.00
			637,000.00	637,000.00	1,552,000.00	1,552,000.00

PROBLEMS

Problem 23–1. The condensed balance sheet of the Wales Manufacturing Company on January 1, 19__, was

Cash	$ 55,000.00	Vouchers Payable	$ 52,000.00
Finished Goods	12,000.00	Common Stock, $100.00 par	100,000.00
Work in Process	20,000.00	Retained Income	10,000.00
Raw Materials	10,000.00		
Machinery and Equipment	65,000.00		
	$162,000.00		$162,000.00

The company operated under the system of perpetual inventory. During the year 19__ the condensed transactions of the company were as follows:

1. Purchased raw materials on account, $45,000.00.
2. Miscellaneous general factory expenses paid, $4,000.00.
3. Depreciation expense on machinery and equipment, $6,000.00.
4. The payroll for the year, which was paid in cash, amounted to $33,000.00. Of this amount, $23,000.00 was for direct labor and $10,000.00 was for indirect labor. Withheld from this payroll were income taxes, $7,400.00, and social security taxes, $600.00. Paid the District Collector of Internal Revenue for all taxes withheld from employees paychecks, $8,000.00.
5. The raw-materials requisition register showed a total of $40,000.00 of raw materials drawn from stock and placed into production during the year.
6. The summary of manufacturing expense distributed showed a total of $19,600.00 manufacturing expense charged to production orders during the year.
7. The summary of completed production orders showed that the total cost value of finished product manufactured during the year was $80,000.00.
8. Finished goods were sold on account, $100,000.00. The summary of finished product sold showed that $67,000.00 of finished goods was withdrawn from stock for purpose of sale.
9. Cash received from customers amounted to $75,000.00.
10. Cash payments to creditors for raw-material purchases (already recorded as vouchers payable) amounted to $50,000.00.
11. General expenses of administration were paid, $22,000.00.

Required

1. Record the beginning balance sheet and the year's transactions in appropriate T accounts. Prepare a trial balance, December 31, 19__.
2. Statement of income for the year ended December 31, 19__.
3. Balance sheet, December 31, 19__.

Problem 23–2. On January 1, 19__, the trial balance of the Lewis Manufacturing Company was

Cash	$ 470,000.00	
Accounts Receivable	300,000.00	
Finished Goods	150,000.00	
Work in Process	250,000.00	
Raw Materials	130,000.00	
Machinery and Equipment	980,000.00	
Allowance for Depreciation—Machinery and Equipment		$ 280,000.00
Office Equipment	120,000.00	
Allowance for Depreciation—Office Equipment		20,000.00
Vouchers Payable		600,000.00
Common Stock, $100.00 par		1,000.000.00
Retained Income		500,000.00
	$2,400.000.00	$2,400,000.00

The Lewis Manufacturing Company operated under the plan of perpetual inventory.

The following condensed transactions occurred during the month of January:

1. Purchased raw materials on account, $56,000.00.
2. Paid general factory expenses, $5,000.00.
3. Depreciation expense on machinery and equipment amounted to $8,000.00.
4. Depreciation expense on office equipment amounted to $1,000.00.
5. Payroll for the month paid: direct labor, $30,000.00; indirect labor, $11,000.00. Withheld from this payroll were income taxes, $9,000.00, and social security taxes, $820.00.
6. Raw materials drawn from stock, $50,000.00.
7. Production orders completed during the month, $100,000.00.
8. Manufacturing expenses charged to production orders totaled $24,000.00.
9. Sales on account, $130,000.00. The cost value of the finished goods withdrawn from stock for purpose of sale was $80,000.00.
10. Collections on accounts receivable, $110,000.00.
11. Miscellaneous creditor payments, $65,000.00.
12. Selling expenses paid, $18,000.00.
13. General expenses paid, $14,000.00.
14. Factory property taxes paid, $1,000.00.

Required

1. Enter the values of the trial balance, January 1, 19__, in appropriate T accounts. Record the transactions of January. Prepare a trial balance, January 31, 19__.
2. Statement of income for the month of January, 19__.
3. Balance sheet, January 31, 19__.

Problem 23–3. The condensed balance sheet of the Glade Manufacturing Company on December 31, 19__, was

Cash	$300,000.00	Vouchers Payable	$260,000.00
Finished Goods	60,000.00	Common Stock, $100.00 par	500,000.00
Work in Process	100,000.00	Retained Income	50,000.00
Raw Materials	50,000.00		
Machinery	300,000.00		
	$810,000.00		$810,000.00

The condensed transactions of the company, operating under the method of perpetual inventory, were as follows for the ensuing 12 months:

1. Purchased raw materials on account, $225,000.00.
2. Paid general factory expenses, $20,000.00.
3. Depreciation expense on machinery, $30,000.00.
4. Payroll for the year, paid in cash, amounted to $165,000.00. Of this amount, $125,000.00 was for direct labor and $40,000.00 was for indirect labor. Withheld from this payroll were income taxes, $40,000.00, and social security taxes, $3,000.00.
5. The raw-materials requisition register showed a total of $215,000.00 of raw materials withdrawn from stock and placed into production during the year.
6. The summary of manufacturing expense distributed showed a total of $95,000.00 manufacturing expense charged to production orders during the year.
7. The summary of completed production orders showed that the total cost value of finished product manufactured during the year was $425,000.00.
8. Finished goods were sold on account, $600,000.00. The summary of finished product sold showed that $365,000.00 of finished goods were withdrawn from stock for purpose of sale.
9. Cash received from customers, $500,000.00.
10. General and selling expenses paid, $170,000.00.
11. Paid the District Director of Internal Revenue for all taxes withheld from employees' pay checks, $43,000.00.
12. Sundry vouchers payable (as already recorded above) were paid, $285,000.00.

Required

1. Record the above information in appropriate T accounts and prepare a trial balance, December 31, 19__.
2. Statement of income for the year ended December 31, 19__.
3. Balance sheet, December 31, 19__.

Problem 23–4. The Goodrich Manufacturing Company operates under the plan of perpetual inventory. Except as required by the additional infor-

mation below, all necessary entries have been made preliminary to the preparation of the adjusted trial balance on December 31, 19__, i.e., inventory entries for the first eleven months of the year are already on the books. Subject to the foregoing, the trial balance of the company on December 31, 19__, is as follows:

Cash	$ 81,000.00	
Accounts Receivable	58,000.00	
Raw Materials	20,000.00	
Work in Process		$ 15,000.00
Finished Goods	23,000.00	
Factory Fixed Assets	80,000.00	
Allowance for Depreciation		10,000.00
Vouchers Payable		40,000.00
Notes Payable		30,000.00
Common Stock, $100.00 par		100,000.00
Retained Income		70,000.00
Sales		300,000.00
Cost of Sales	180,000.00	
Direct Labor	30,000.00	
Indirect Labor	28,000.00	
Depreciation Expense—Factory Fixed Assets	6,000.00	
Miscellaneous Factory Expense	34,000.00	
Manufacturing Expense Applied		61,000.00
Selling Expenses	32,000.00	
General Expenses	27,000.00	
	$599,000.00	$626,000.00

The following additional information has not yet been posted to the ledger:

1. In the December voucher register, the column for purchases of raw materials shows a total of $27,000.00. All other columns of the voucher register have been posted.
2. The raw-materials requisition register for December shows a total of $13,000.00.
3. The summary of manufacturing expense distributed shows a total of $9,000.00.
4. The summary of completed production orders for December shows a total of $27,000.00.
5. The Cost of Sales column in the sales book for December shows a total of $20,000.00.

Required

1. Statement of income for the year ended December 31, 19__.
2. Balance sheet, December 31, 19__.

Problem 23–5. The McCormick Manufacturing Company operates under the plan of perpetual inventory. On December 31, 19__, the trial balance of the company was

Cash	$ 80,000.00	
Accounts Receivable	70,000.00	
Notes Receivable	90,000.00	
Notes Receivable Discounted		$ 23,000.00
Finished Goods	30,000.00	
Work in Process	28,000.00	
Raw Materials	33,000.00	
Factory Fixed Assets	100,000.00	
Allowance for Depreciation		20,000.00
Accounts Payable		50,000.00
Notes Payable		20,000.00
Common Stock, 20,000 shares no-par		209,000.00
Retained Income		70,000.00
Sales		300,000.00
Cost of Sales	200,000.00	
Direct Labor	70,000.00	70,000.00
Indirect Labor	28,000.00	
General Factory Expense	36,000.00	
Depreciation Expense—Factory Fixed Assets	8,000.00	
Manufacturing Expense		70,000.00
Selling Expense	24,000.00	
General Expense	35,000.00	
	$832,000.00	$832,000.00

The total of the debit side of the Raw Materials inventory account was $102,000.00, and total credits were $69,000.00. At the beginning of the year the balance of the account was $20,000.00.

At the beginning of the year the balance of the Work in Process account was $24,000.00.

The total of the debit side of the Finished Goods inventory account was $230,000.00; total credits were $200,000.00. At the beginning of the year the balance of the Finished Goods account was $25,000.00.

Required

1. Statement of income for the year ended December 31, 19__. Show the cost of goods manufactured and sold in a separate schedule.
2. Balance sheet, December 31, 19__.

Problem 23–6. The following information relates to one department of the Brush-Tex Company, operating under a process cost system:

	Units	
Work in process, December 1, 19__	0	
Production completed during the month of December, 19__	8,200	
Work in process, December 31, 19__	800	(20% complete)

Required

1. Equivalent production of finished units produced during the month of December, 19__.
2. Equivalent production of finished units produced during the month of December, 19__, if, on December 1, 19__, there had been 1,000 units of work in process on hand, 40% complete.

Problem 23–7. The following data relate to the Cline-Zee Corporation for the year ended December 31, 1958. The company operates under a process cost system.

Quantity Report (in units):	*Dept. #1*	*Dept. #2*
Work in process, December 31, 1957	0	0
Completed and transferred to Department 2	100,000	
Received from Department 1		100,000
Completed and transferred to inventory of finished goods		75,000
Completed and on hand, December 31, 1958	10,000	5,000
Work in process, December 31, 1958:		
1/2 completed	10,000	
3/4 completed		20,000
Production Cost Report:		
Raw materials	$ 40,000.00	$20,000.00
Direct labor	50,000.00	60,000.00
Manufacturing expense	25,000.00	15,000.00
	$115,000.00	$95,000.00

Required

What accounting values should be placed on the inventories of work in process, December 31, 1958?

Chapter 24 DEPRECIATION

Definition

As time goes by, the fixed assets of a business experience a decline in accounting value commensurate with the decline in the amount of services still receivable from them. The investment in each fixed asset will expire as the service value of the asset expires. The investment in each fixed asset will have been used up in operations just as surely as electrical current is used up in operations. A particular machine may have a life of many years but, eventually, its usefulness will come to an end. In the classic words of Henry Rand Hatfield: "All machinery is on an irresistible march to the junk heap, and its progress, while it may be delayed, cannot be prevented by repairs."[1]

A fixed asset is simply a "bundle of future services receivable" and, as these services are used up, the capital invested in the fixed asset converts into expense. The term "depreciation" represents the dollar decline which occurs in the recorded accounting value of a fixed asset because of a shrinkage in the amount of future services receivable.[2] After depreciation expense has been recorded, the reduced dollar value of a fixed asset represents the reduced amount of future service to be received from it. The term "value" here means accounting value or going-concern value—*not* market value or value as established by an engineer in measuring the efficiency of an asset.

This definition of depreciation should be fixed firmly in mind because a loss or shrinkage in value from any other point of view is not depreciation for purposes of accounting. Acceptance of this definition may be facilitated by realizing that depreciable fixed assets are fundamentally nothing more than long-term prepaid expense accounts.

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[1] Henry Rand Hatfield, *Accounting: Its Principles and Problems* (New York: Appleton-Century-Crofts, Inc., 1927), p. 130.

[2] "Broadly speaking, depreciation is the loss not restored by current maintenance, which is due to all the factors causing the ultimate retirement of the property. These factors embrace wear and tear, decay, inadequacy, and obsolescence."—*Lindheimer et al.* v. *Illinois Bell Telephone Co.*, 292 U. S. 151 (1934).

The cost of a productive facility is one of the costs of the services it renders during its useful economic life. Generally accepted accounting principles require that this cost be spread over the expected useful life of the facility in such a way as to allocate it as equitably as possible to the period during which services are obtained from the use of the facility. This procedure is known as depreciation accounting, a system of accounting which aims to distribute the cost . . . of tangible capital assets, less salvage (if any), over the estimated useful life of the unit . . . in a systematic and rational manner. It is a process of allocation, not of valuation.[3]

Depreciation expense applies only to tangible fixed assets. Land is generally considered an exception. However, the fertility of land may be reduced because of cultivation and, where this is the case and the loss is not restored through the use of fertilizers, even land may be said to depreciate when the revenue-producing utility of the land depends upon its fertility.

Some of the merchandise of an inventory may *deteriorate* in value. This deterioration is depreciation. Accountants, however, have generally preferred to handle this particular loss of accounting value as a problem of inventory valuation rather than as a problem which affects the depreciation expense account of a business.

Causes of Depreciation

Depreciation expense commonly occurs through the "wear and tear" to which a fixed asset is subject by operations, and through the deterioration in service value which comes with the passage of time (age). Engines, typewriters, dispersion dryers, bookkeeping machines, planes, pneumatic tools, and so on, are subject to this physical depreciation. Assets which depreciate physically do not usually change in size; exceptions exist, however, as may be witnessed by the reduction in size of an abrasive stone as it is used up. In all these cases, however, the asset undergoes a more or less steady diminution in value because of a reduction in the amount of future services receivable. Finally, the asset must be retired because it is no longer useful.

Aside from wear, tear, and decay, depreciation may be caused by any of the following:

1. Obsolescence. Improvements and inventions may make existing equipment unprofitable for further use, or they may shorten the time period of profitable employment. As the necessity for the premature retirement of an asset is converted from possibility into actuality, the amount of depreciation expense per accounting period is increased as the estimate of the useful life of the fixed asset is reduced.

2. Inadequacy. Premature depreciation may be forced upon an asset

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[3] American Institute of Certified Public Accountants, *Accounting Research Bulletin No. 43* (New York: 1953), p. 76.

because of the fact that the asset is no longer able to meet the requirements of a growing volume of business. The demand for service exceeds the ability of the asset to deliver it. The fixed asset, although serviceable for a smaller volume of output, must be retired in favor of a new fixed asset of greater service capacity.

3. Cessation of Demand. The value of a fixed asset may expire because the market for the product produced by the fixed asset has disappeared.

Necessity for Recording Depreciation Expense

As already stated, depreciable fixed assets are really long-term prepaid expense accounts whose balances represent the present worths of future services receivable. As these services are consumed, the capital invested in fixed assets is consumed. The capital is consumed over the life periods of these fixed assets and, as it is periodically consumed, the investment is converted into periodic depreciation expense.

Accurate cost and profit figures require the recording of all direct and indirect expenses in the books of a business. Depreciation is one of these expenses. Depreciation expense—as the cost of fixed asset *services* consumed—must be recorded because it is one of the costs which are incurred in producing the periodic income of a business. Depreciation is a real expense of doing business; it represents the consumption of value—the cost of services consumed—just as surely as does cash which is disbursed for advertising.

If depreciation expense were not recognized in the accounts of a business, the net income of that business would be overstated and depreciable assets would appear on the balance sheet of that business at values greater than their fair accounting values. Errors of this kind are serious misrepresentations of fact.

In summary, depreciation expense must be recognized in the financial statements of a business for the following reasons:

1. The net income of a business will be stated more fairly if the statement of income for an accounting period includes a fair value for the expense of depreciation.

2. Since depreciation expense is one of the costs incurred in operating a business, it must be recorded because it is one of the costs of producing the income of that business.

3. Maintenance of the integrity of invested capital is an essential prerequisite to the realization of profits, i.e., a business can earn no profit unless its invested capital has been maintained unimpaired. An accounting provision for the expense of depreciation is necessary to guard against an impairment of capital which might otherwise occur through policies of management predicated upon income statements whose net incomes have been overstated because depreciation has been excluded.

4. The balance sheet will be more fairly stated if the values for depreciable fixed assets are stated at accounting values giving recognition to the effects of cumulative depreciation to the date of this balance sheet.

5. It has been legally established that, unless provision has been made for depreciation expense, the disbursement of all the "profits" of a company as dividends to stockholders is an illegal procedure because of the impairment of capital which is caused by such disbursement. The leading case upholding the validity of an annual charge to profit and loss for the expense of depreciation is *City of Knoxville* v. *Knoxville Water Company* (212 U. S. 1 [1909]).

The Amount of Depreciation Expense

In establishing the amount of depreciation expense to be charged against the operations of a business over the time period represented by the useful life of an asset, three factors must be considered:

1. Original cost of the asset, including all costs originally expended to make the asset available for service. These costs include such costs as freight paid on the depreciable asset and installation costs.
2. The estimated net realizable scrap value of the asset at the end of its expected period of useful life.
3. The estimated service life of the asset. This life may be expressed in terms of
   a) units of time, as years, months, days;
   b) units of hours, as total operating hours; or
   c) units of production, as total estimated physical output.

The estimated service life of a fixed asset is naturally affected by the policy of repairs and renewals. Depreciation will be less rapid when depreciable assets are maintained in a state of good repair. The policy of repairs and renewals may thus, in one sense, be looked upon as one of the determinants of estimated useful life since the life of any depreciable asset will be longer when it is well maintained. The cost of maintenance, further, should be one of the considerations entering into the original decision of a business management to buy or not to buy a particular fixed asset.

The difference between original cost and scrap value (the first and second factors above) is the total depreciable value of a fixed asset. It is the amount of depreciation expense which should be charged against income over the life of the asset.

From the standpoint of practical accounting it may be remarked, parenthetically, that the scrap value of an asset is usually disregarded in calculating the amount of depreciation.

The allocation of total depreciation expense to individual accounting periods is considered at length in the pages which follow.

Recording Depreciation Expense

As originally illustrated on page 259 of this book, the depreciation expense of an accounting period is recorded by the following type of bookkeeping entry:

Depreciation Expense—Building	xxx xx	
Allowance for Depreciation—Building		xxx xx
To record depreciation expense on building.		
Depreciation Expense—Machinery	xxx xx	
Allowance for Depreciation—Machinery		xxx xx
To record depreciation expense on machinery.		

The *credit* value of an entry for depreciation records the reduction which has taken place in the accounting value of a depreciable fixed asset. The use of an allowance for depreciation account for a depreciable fixed asset has certain advantages:

1. The cost of the fixed asset is distinctively preserved. This is an important value when the amount of the depreciation expense provision for an accounting period is being determined. It is important, too, in the preparation of fair and informative balance sheets. And it is a useful value when income tax returns are being prepared.
2. The use of an allowance for depreciation account lends emphasis to the fact that this account is a *valuation* account whose function is that of representing *estimated* cumulative depreciation expense to date.

Each allowance for depreciation account is a separate account which records the reduction in the accounting value of the fixed asset to which it relates. Each allowance for depreciation account is a measure of the cumulative depreciation expense which has been written off against the asset since the beginning of its service life. The reader of the balance sheet is informed to what extent the asset has been depreciated in the accounts—10%, 50%, 90%, and so on—and permitted thereby to judge, within the limits of his own knowledge and qualifications, the adequacy of the amount of the allowance for depreciation.

3. There is a clear separation of credits for accrued depreciation and credits to record assets sold or otherwise retired from service.

It is customary to carry a separate depreciation expense account and a separate allowance for depreciation account for each class of fixed assets. This is done because of the variances which exist in rates of depreciation among different assets; and because, also, it facilitates the apportionment of depreciation expense to operations, departments, and products.

The function of an account which represents a fixed asset subject to depreciation is to show original cost. The function of its related allowance for depreciation account is to show, at any given date, the cumulative amount of depreciation expense recorded for the asset to date. The difference between a fixed asset account and its related allowance for depreciation account is called the net book value or present net accounting value of the asset. The net book value of a depreciable fixed asset is its "unamortized cost" i.e., that part of original cost which has not yet been written off to depreciation expense. Because it is used to determine the net book value of a depreciable fixed asset, an allowance for depreciation account is called a *valuation* account.

Allocation of Depreciation Expense to Accounting Periods

The proper journal entries for recording depreciation expense have just been described. Our next concern is the problem of how much depreciation expense to apportion to each accounting period. Just what constitutes a fair periodic charge for depreciation, in a given case, is not always easy to state. The rate of depreciation varies with different assets and with the conditions under which they operate. Further, the amount of depreciation expense for any particular period is necessarily an estimated amount—the best estimate possible, of course, but nevertheless always an estimate. This is so because, with the single exception of original cost, each factor entering into the determination of the amount of depreciation expense is, in itself, an estimate. It is therefore impossible to state with exactness just how much an asset has depreciated in any given period; an approximation only can be made. Our main concern with the amount of the provision for depreciation expense in any given accounting period is that the amount be adequate. It is better to set aside too much depreciation than not enough, for this is at least insurance against overstatement of profits and their unwarranted disbursement, as well as insurance against unknowing impairment of capital through inadequate provision for the expense of depreciation.

It should be recognized that although an asset may remain at full efficiency for a rather long period of time without noticeable deterioration of value, it is nevertheless proper to charge periods in which the asset remains at full efficiency with depreciation expense inasmuch as these periods contribute to the ultimate necessity of retiring the asset from service.

Various methods have been developed for allocating depreciation expense to accounting periods. In general, they fall into four groups:

1. The amount of depreciation expense is the same from period to period.
2. The amount of depreciation expense decreases from period to period.
3. The amount of depreciation expense increases from period to period.
4. The amount of depreciation expense is proportionate to periodic operating activity.

There are many specific methods to represent groups 2, 3, and 4. The selection, in a given case, of one or another of the many methods which are available is dependent upon a decision as to which method best represents the conditions of the case under consideration. The selection should be carefully made because the fairness of the statement of income and the balance sheet is directly affected thereby.

Adherence to some method of allocating depreciation expense to the accounting periods of a business is important because it provides a sys-

tematic plan for the proper recognition of depreciation expense in the accounts. It is unquestionably better to have some plan than no plan at all.

Some of the more familiar methods for establishing the periodic charge to depreciation expense will now be described.

Methods for Establishing the Periodic Charge to Depreciation Expense

The illustrations which are given below rest on the following symbols and factual data:

	Factual Data Used in Illustrative Problems
C = Cost	$10,600.00.
S = Scrap Value	$600.00.
n = Estimated Life	10 years, or 50,000 working hours, or 300,000 units of production.
D = Amount of Depreciation per Period	To be computed.
r = Rate of Depreciation	Various. See problems.

I. The amount of depreciation expense is the same from period to period

This, the "straight-line method," is widely used. It is simple and easy to apply. The periodic charge for depreciation expense is arrived at through use of the following formula:

$$D = \frac{C - S}{n} = \frac{\$10{,}600.00 - \$600.00}{10} = \$1{,}000.00$$

The following table shows the application of this formula:

Year	*Debit Depreciation Expense*	*Credit Allowance for Depreciation*	*Amount of Allowance for Depreciation*	*Book Value of Asset at End of Year*
				$10,600.00
1	$ 1,000.00	$ 1,000.00	$ 1,000.00	9,600.00
2	1,000.00	1,000.00	2,000.00	8,600.00
3	1,000.00	1,000.00	3,000.00	7,600.00
4	1,000.00	1,000.00	4,000.00	6,600.00
5	1,000.00	1,000.00	5,000.00	5,600.00
6	1,000.00	1,000.00	6,000.00	4,600.00
7	1,000.00	1,000.00	7,000.00	3,600.00
8	1,000.00	1,000.00	8,000.00	2,600.00
9	1,000.00	1,000.00	9,000.00	1,600.00
10	1,000.00	1,000.00	10,000.00	600.00
	$10,000.00	$10,000.00		

The straight-line method of depreciation has enjoyed wide use because, as a simple method, it has generally yielded satisfactory results. Concurrently, with its use, there has been developed a large amount of data—based on practical experience—relating to straight-line depreciation rates recommended for various kinds of fixed assets.

II. The amount of depreciation expense decreases from period to period

Case 1

Under the sum of the years' digits method, diminishing rates (expressed fractionally) are applied to the original total depreciable value of an asset. Determination of the fractional rate to be used each year may be made as follows:

a) Obtain the sum of the years' digits:

$$1 + 2 + 3 + 4 + 5 + 6 + 7 + 8 + 9 + 10 = 55$$

b) The depreciation expense of the first year will be 10/55 of $10,000.00; of the second year, 9/55 of $10,000.00; of the third year, 8/55 of $10,000.00; and so on.

The following table shows the application of this "reducing fraction" method:

Year	*Fraction*	*Debit Depreciation Expense*	*Credit Allowance for Depreciation*	*Amount of Allowance for Depreciation*	*Book Value of Asset at End of Year*
					$10,600.00
1	10/55	$ 1,818.18	$ 1,818.18	$ 1,818.18	8,781.82
2	9/55	1,636.36	1,636.36	3,454.54	7,145.46
3	8/55	1,454.55	1,454.55	4,909.09	5,690.91
4	7/55	1,272.73	1,272.73	6,181.82	4,418.18
5	6/55	1,090.91	1,090.91	7,272.73	3,327.27
6	5/55	909.09	909.09	8,181.82	2,418.18
7	4/55	727.27	727.27	8,909.09	1,690.91
8	3/55	545.45	545.45	9,454.54	1,145.46
9	2/55	363.64	363.64	9,818.18	781.82
10	1/55	181.82	181.82	10,000.00	600.00
	55/55	$10,000.00	$10,000.00		

This table shows that the annual charge for depreciation expense under the "sum of the years' digits" method decreases rapidly and that the difference between the charges for depreciation in the early and late years is large. The method, however, is approved by the Internal Revenue Code of 1954 for determining depreciation expense deductions in arriving at taxable net income.

The following two cases illustrate two other "reducing-charge" methods also approved by the Internal Revenue Code of 1954 for determining depreciation expense deductions.

Case 2

Under the "declining-balance" method, the depreciation rate is twice that which would be used under the straight-line method. The rate is applied against the unrecovered cost of the asset, thus:

Year	*Debit Depreciation Expense*	*Credit Allowance for Depreciation*	*Amount of Allowance for Depreciation*	*Book Value of Asset at End of Year*
				$10,600.00
1	$2,120.00	$2,120.00	$2,120.00	8,480.00
2	1,696.00	1,696.00	3,816.00	6,784.00
3	1,356.80	1,356.00	5,172.80	5,427.20
4	1,085.44	1,085.44	6,258.24	4,341.76
5	868.35	868.35	7,126.59	3,473.41
6	694.68	694.68	7,821.27	2,778.73
7	555.75	555.75	8,377.02	2,222.98
8	444.60	444.60	8,821.62	1,778.38
9	355.68	355.68	9,177.30	1,422.70
10	284.54	284.54	9,461.84	1,138.16
	$9,461.84	$9,461.84		

Under this method, if the asset is sold or abandoned at the end of ten years, the unrecovered cost of $1,138.16 is a loss on the date of sale or abandonment. If the asset is continued in use, declining-balance depreciation of 20% annually continues until the asset is sold or otherwise retired from service.

Case 3

The Internal Revenue Code of 1954, Sec. 167 (e), also allows a taxpayer to shift from a declining-balance method to straight-line depreciation in any year. This means that a taxpayer can take advantage of the relatively large write-offs permitted by a declining balance method in the first years of fixed-asset life without being penalized by a sizable unamortized value at the end of useful life. This kind of method may be used provided the total depreciation allowance for a fixed asset, at the end of each year, does not exceed—during the first two thirds of the useful life of the asset—the total depreciation allowance which would have been accumulated under the declining-balance method (illustrated in Case 2).

In the following table the declining-balance method is used for five years, then the straight-line method for the last five years.

Year	*Debit Depreciation Expense*	*Credit Allowance for Depreciation*	*Amount Allowance for Depreciation*	*Book Value of Asset at End of Year*
				$10,600.00
1	$ 2,120.00	$ 2,120.00	$ 2,120.00	8,480.00
2	1,696.00	1,696.00	3,816.00	6,784.00
3	1,356.80	1,356.80	5,172.80	5,427.20
4	1,085.44	1,085.44	6,258.24	4,341.76
5	868.35	868.35	7,126.59	3,473.41
6	574.68	574.68	7,701.27	2,898.73
7	574.68	574.68	8,275.95	2,324.05
8	574.68	574.68	8,850.63	1,749.37
9	574.68	574.68	9,425.31	1,174.69
10	574.69	574.69	10,000.00	600.00
	$10,000.00	$10,000.00		

Commentary. Decreasing charge methods for the calculation of periodic depreciation expense probably leave net book values of depreciable fixed assets closer to secondhand or trade-in values than any other method of depreciation. However, reducing charge methods for computing depreciation have been seldom used in past years except possibly in a few cases where secondhand or trade-in values of fixed assets (like trucks) have been of significant importance or where considerable uncertainty has existed as to the accounting life of fixed assets.

Defenders of reducing charge methods point out that this method of depreciation accounting deserves consideration because the combination of decreasing yearly charges for depreciation expense and increasing yearly charges for maintenance expense results in roughly equalizing or smoothing out the annual costs of a business as they relate to the use of fixed assets. Periodic income, presumably, is also more fairly stated.

More recently, the defenders of decreasing periodic charges for depreciation expense have advanced the argument that investments in fixed assets are often made upon the prospect of profits to be earned over a *shorter* future period of time than is represented by the *normal* life of a fixed asset. The profits to be earned in the latter part of this *normal* life period are conjectural. In order to "recover their capital" rapidly through depreciation charges, businessmen should write off the cost of fixed assets during the foreseeable good years of the near-term future. If incomes and costs are to be matched properly, large provisions for depreciation expense should be matched against the expected—and relatively certain—gross revenues of the earlier years of fixed-asset use. It is also stated that, under this procedure, periodic net income will be stated more fairly.

One financial result of the use of a reducing charge method is that the heavier charges for depreciation expense—in the early years of fixed-asset life—reduce the taxable net income of a business. In these years, therefore, less money is paid out for income taxes and more money is retained for use in the business. This is a factor of considerable importance to businesses whose expansion is heavily dependent upon current earnings. Reducing charge methods also encourage businessmen to keep their fixed-asset facilities up to date by encouraging them to purchase improved equipment —purchases which, under a policy of straight-line depreciation, might otherwise be deferred because of a large unamortized investment in fixed assets currently in use.

Impetus to the wider use of decreasing charge methods for computing depreciation expense was given by the Internal Revenue Code of 1954. Section 167 of the code provides for the use of the straight-line method, the declining-balance method, the sum of the years' digits method, or any other consistent method that will produce an annual allowance in which the deductions during the first two thirds of the useful life of a property do not exceed the allowance for depreciation computed according to the declining-balance method.

III. The amount of depreciation expense increases from period to period

Under this theory, periodic depreciation expense is determined by applying increasing rates against the depreciable cost of a fixed asset. The amount of depreciation expense will then increase from period to period.

The effect of an increasing periodic charge for depreciation expense is, of course, a smaller charge to revenue in early years and a greater charge to revenue in later years. This, it may be argued, tends to reflect the facts of physical depreciation, light in early years, heavy in later years. However, since maintenance expenses tend to increase from year to year, the combination of increasing periodic charges for both depreciation expense and maintenance expense so heavily favors early years at the expense of later ones that an increasing periodic charge for depreciation expense must be seriously objected to as a method which is not sufficiently conservative and which does not contribute to stating the net income of a business fairly.

As a method of depreciation accounting, an increasing periodic charge for depreciation expense has not been accepted in practice.

IV. The amount of depreciation expense from period to period is proportionate to periodic operating activity

This method of depreciation accounting is based upon the assumption that periodic depreciation expense varies according to the use or production of a fixed asset. It is well to qualify this statement by noting that the relationship is not inflexibly directly proportionate. An increase, for example, of 100% in the operating hours of a machine in one period as compared with an earlier period does not necessarily mean that the amount of depreciation expense has also increased 100%. It is basically true, however, that depreciation expense is greater, in some degree at least, for periods of greater production than for periods of lesser production.

Case 1

The periodic provision for depreciation expense is based upon the number of hours the fixed asset has been used. In applying this method, it is necessary to estimate the total life of the asset in terms of working hours, and then to divide the total depreciation expense by the total estimated working hours to arrive at the estimated depreciation expense per working hour. By formula, the rate per hour is

$$r = \frac{C - S}{n} = \frac{\$10{,}600.00 - \$600.00}{50{,}000} = \$0.20 \text{ per hour}$$

The depreciation expense of a given period will be working hours *times* estimated depreciation expense per hour.

Although the estimated life of a fixed asset may have been fixed at 50,000 working hours, the actual number of total working hours may be

more or less than 50,000. In the example below the actual number of working hours proves to be 49,601.

The following table shows the application of the "working hours" method of providing for depreciation expense:

Year	*Hours Operated*	*Debit Depreciation Expense*	*Credit Allowance for Depreciation*	*Amount of Allowance for Depreciation*	*Book Value of Asset at End of Year*
					$10,600.00
1	4,212	$ 842.40	$ 842.40	$ 842.40	9,757.60
2	5,628	1,125.60	1,125.60	1,968.00	8,632.00
3	7,042	1,408.40	1,408.40	3,376.40	7,223.60
4	4,879	975.80	975.80	4,352.20	6,247.80
5	5,632	1,126.40	1,126.40	5,478.60	5,121.40
6	5,948	1,189.60	1,189.60	6,668.20	3,931.80
7	3,422	684.40	684.40	7,352.60	3,247.40
8	4,217	843.40	843.40	8,196.00	2,404.00
9	4,068	813.60	813.60	9,009.60	1,590.40
10	4,553	910.60	910.60	9,920.20	679.80
	49,601	$9,920.20	$9,920.20		

The unamortized cost of $79.80 would be written off to the account titled "Loss on Retirement or Sale of Fixed Assets."

Case 2

The periodic provision for depreciation expense is based upon the number of units of production. In applying this method, it is necessary to estimate the total life of the asset in terms of its expected production in units of product, and then to divide the total depreciation expense by the total estimated production to arrive at the estimated depreciation expense per unit of production. By formula, the rate per unit of production is

$$r = \frac{C - S}{n} = \frac{\$10{,}600.00 - \$600.00}{300{,}000} = \$0.03\tfrac{1}{3} \text{ per unit of production}$$

The depreciation expense of a given period will be units of production *times* estimated depreciation expense per unit of production.

A table showing the application of the "production" method of providing for depreciation expense would be similar to (but not identical with) the table illustrated at the top of this page.

"Working hours" or "production" methods for determining periodic provisions for depreciation expense are particularly applicable to conditions where the major cause of depreciation is wear and tear. These methods conform to the fact that fixed assets (like machines, for example) wear out more rapidly under conditions like those of high speeds or overtime operations. Under these conditions, too, wear and tear is likely to be greater because of less opportunity to make needed expenditures for maintenance.

For cost accounting purposes, "production" (or "output") methods for calculating periodic depreciation expense have some advantage inas-

much as depreciation expense per unit of output is fixed at a uniform amount, a distribution of total depreciation expense which appears fair.

"Working hours" and "production" methods are especially applicable to fixed assets whose service lives can be rather accurately estimated in terms of hours or production. Examples are airplane engines in terms of hours of flight, and trucks and automobiles in terms of expected miles of service.

Composite Rate Method

The fixed assets of a business are usually divided into major groups such as, for example, machinery, furniture, and office equipment and machines. Each of these groups may contain many individual units, among which there may exist significant variations with respect to their several life expectancies. When the units of a group are numerous, the ascertainment of the amount of depreciation expense for a given accounting period—by taking a total of depreciation-expense amounts for each and all units—may well become complex, laborious, and expensive. In their attempt to circumvent this consequence and yet obtain an acceptable group value for depreciation expense, some firms determine the amount of their periodic provision for depreciation expense by a method which is called the composite rate method. This method is essentially an average rate of depreciation applied to a fixed-asset group. Fundamentally, however, the method is an expression of one of the basic methods of depreciation-expense determination already described in this chapter. Description of the composite rate method of depreciation will not be made in this chapter inasmuch as the method may be more conveniently described following the introduction and exposition of the plant ledger. Discussion and illustration of the composite rate method will therefore be deferred to Chapter 25.

Depreciation Expense Is Based upon Cost

The foregoing examples emphasize an important principle of accounting: that depreciation is based upon original cost. It should be apparent that, with respect to any given fixed asset, the total depreciation expense relating to this asset—over its period of useful life—cannot be more than the amount of the investment in the asset.

There are some who hold that depreciation expense should be based upon replacement cost if that cost is higher than original cost. Public utilities have entertained this view and have given it support, especially for rate-making purposes. Others have held a similar point of view in order to produce "realistic" statements of income, i.e., by recognizing current prices in making provisions for depreciation. From the standpoint of the income statement and the balance sheet, however, the recording of de-

preciation expense upon the basis of replacement cost should be regarded dubiously for several reasons:

1. Because total expenses will be overstated, net income will be understated.
2. In the absence of upward revaluations of assets on the books, special new bookkeeping entries will be required in order to limit the balance in the allowance for depreciation account to an accumulated value based on cost.
3. It represents a new, untested philosophy as to the nature and function of accounting statements.
4. If it is logical to depreciate an asset on the basis of replacement cost when that cost is in excess of original cost, it is equally logical to depreciate an asset on the basis of replacement cost when that cost is less than original cost. Upon analysis it would appear that both positions are untenable.

The wisdom of adhering to cost in providing for depreciation has been strongly stated by the American Institute of Certified Public Accountants, which believes that

> accounting and financial reporting for general use will best serve their purposes by adhering to the generally accepted concept of depreciation on cost, at least until the dollar is stabilized at some level. An attempt to recognize current prices in providing depreciation, to be consistent, would require the serious step of formally recording appraised current values for all properties, and continuous and consistent depreciation charges based on the new values. Without such formal steps, there would be no objective standard by which to judge the propriety of the amounts of depreciation charges against current income, and the significance of recorded amounts of profit might be seriously impaired.[4]

Information on Depreciation Rates

The depreciation rate to be applied against a fixed asset, or class of fixed assets, should be carefully selected. If past experience is inadequate to suggest the rate to be used, outside sources, such as the following, may be helpful:

1. The manufacturer of the fixed asset to be depreciated
2. The experience of other businesses employing depreciable fixed assets of like kind
3. Trade associations
4. Internal Revenue Service, Bulletin F on depreciation studies (1942)
5. Reputable publishers of income tax guides
6. *Accountants' Handbook* (1956)

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[4] American Institute of Certified Public Accountants, *Accounting Research Bulletin No. 43* (New York, 1953), p. 68.

Position of the Allowance for Depreciation Account on the Balance Sheet

The present value of any depreciable fixed asset is found in two accounts, the asset account and its related allowance for depreciation account. The difference between the two accounts is the unrecovered (or unamortized) cost, i.e., "net book value," of the asset. On the balance sheet, therefore, each allowance for depreciation account will be deducted from its related fixed asset account, thus:

Machinery	$100,000.00	
Less Allowance for Depreciation	35,000.00	$65,000.00
Delivery Equipment	$ 20,000.00	
Less Allowance for Depreciation	11,000.00	9,000.00
		$74,000.00

or alternatively,

	Cost	*Allowance for Depreciation*	*Net Book Value*
Machinery	$100,000.00	$35,000.00	$65,000.00
Delivery Equipment	20,000.00	11,000.00	9,000.00
			$74,000.00

The advantages of these arrangements are several:

1. The original cost of each class of fixed asset is given.
2. Each allowance for depreciation account measures, up to the date of the balance sheet, the cumulative impairment of original cost which has taken place because of depreciation.
3. Since the cumulative provision for depreciation is clearly shown, the reader of the balance sheet is allowed to judge for himself the adequacy of the allowance for depreciation.

Occasionally all depreciation allowance accounts may be consolidated into one Allowance for Depreciation account. The objections to this practice, on the books as well as on the balance sheet, may be briefly stated:

1. There is no way of determining the book value of each class of fixed assets.
2. There is no way of judging whether or not the actual current provision or the cumulative provision for depreciation for each class of fixed assets is adequate.

"Depreciation Expense" and the "Funds" of a Business

The allowance for depreciation is an account which shows the portion of original cost charged to depreciation expense to date. It is an account which shows the cumulative shrinkage which has taken place to date in the

accounting value of an asset because of provisions for depreciation expense. The allowance for depreciation account is a valuation account. It is not a fund. Nor is it purchasing power to be used for the replacement of depreciated assets with new assets. The allowance for depreciation account, however, does show a value which is equal to the amount of new assets which must have been brought into the business through the channel of realized gross revenues (sales and other gross incomes) to compensate for the loss of capital sustained by the expense of depreciation. These new assets are not normally segregated nor do they normally constitute a depreciation fund. These assets, even though currently on hand, may not be in a form liquid enough to serve as the direct means of replacing depreciated assets with new. These comments will be illustrated in the following example.

Example

Assume that the condensed balance sheet of the business of Ray L. Jackson on December 31, 1948, was

Assets		*Net Worth*	
Cash	$ 10,000.00	Ray L. Jackson, Capital	$100,000.00
Other Current Assets	70,000.00		
Depreciable Fixed Assets (at cost, new)	20,000.00		
	$100,000.00		$100,000.00

The fixed assets have a life expectancy of 10 years.

Assume, further, that the condensed statement of income of the business of Mr. Jackson for the 10-year period, December 31, 1948, to December 31, 1958, was

Sales (for cash)	$1,000,000.00
Cost of Sales (paid in cash)	500,000.00
Gross Profit	$ 500,000.00
Expenses (paid in cash)	380,000.00
Net Income (before depreciation expense)	$ 120,000.00
Depreciation Expense	20,000.00
Net Income (after depreciation expense)	$ 100,000.00

With profits being realized in cash and, assuming no balance sheet changes other than those to recognize profits and depreciation, the condensed balance sheet of Mr. Jackson on December 31, 1958, would be

Assets			*Net Worth*	
Cash		$130,000.00	Ray L. Jackson, Capital	$200,000.00
Other Current Assets		70,000.00		
Depreciable Fixed Assets	$20,000.00			
Less Allowance for Depreciation	20,000.00	0.00		
		$200,000.00		$200,000.00

Cash has increased from $10,000.00 to $130,000.00, the net increase of $120,000.00 being received through collections made on sales of merchan-

dise. From the standpoint of Mr. Jackson's proprietary interest, $20,000.00 of the new assets brought into the business by the $120,000.00 of profits (before depreciation) of the ten-year period are assets which replace the assets consumed during the period, i.e., the $20,000.00 of capital consumed by depreciation. The balance, $100,000.00, is net gain, or capital increment. In this particular example the $20,000.00 of assets which make good the capital consumed by depreciation are, on December 31, 1958, in the form of cash. This cash, like any cash, may be used for any proper business purpose. It could be used to purchase the new fixed assets needed to replace those which have worn out.

Suppose, however, that the new assets of $120,000.00 brought into the business had been used to buy land. The balance sheet would then have been

Assets			*Net Worth*	
Cash		$ 10,000.00	Ray L. Jackson, Capital	$200,000.00
Other Current Assets		70,000.00		
Land		120,000.00		
Depreciable Fixed Assets	$20,000.00			
Less Allowance for Depreciation	20,000.00	0.00		
		$200,000.00		$200,000.00

Although profits and capital remain at the same values as before, the balance sheet of Mr. Jackson is significantly different. Mr. Jackson has $200,000.00 worth of assets, $20,000.00 of which are new assets replacing the consumption of capital through depreciation. But, although they serve as compensatory capital, these assets are not in the form of cash or its immediate equivalent. They exist in the form of land. Yet new depreciable fixed assets, when purchased, must be paid for in cash (or a liability incurred for them). In this particular case, Mr. Jackson has a replacement problem which is financially acute because of his lack of available cash.

The "moral" of this second balance sheet is plain: The prudent businessman will not only make provision for periodic depreciation expense; he will also be careful to see that cash is on hand when new depreciable assets must be purchased to replace those worn out. *He must plan to that end.* If he desires, cash or securities may be set aside in a separate fund-for-the-purchase-of-fixed-assets in order to be certain that liquid assets will be on hand when the replacement of fixed assets is necessary. This is a problem of finance, however, and is not related to the depreciation accounting method of a business. But, whether or not a business establishes a fund for the purchase of fixed assets, its general liquidity should be *planned* so as to be commensurate with its expected future cash requirements. This calls for careful *management of cash*. This management, in turn, requires a clear appreciation of the fact that the cash position of a business is not necessarily related to the accounting policy of a business.

The foregoing discussion has assumed that the fixed asset which is

being depreciated will ultimately be replaced. Actual replacement will be made, of course, only if the purchase of new fixed assets is worth while. To purchase or not is a question of business policy. It is a question which, having been decided upon by the management of a business, will be incorporated in the program of financial administration.

Retiring Depreciable Fixed Assets

If an asset subject to depreciation is sold or retired from service, the depreciation accrued since the books were last closed should be recorded by *debiting* Depreciation Expense and *crediting* the proper Allowance for Depreciation account. The difference between the price received for the asset, if any, and its book value is the gain or loss on the disposition of the asset.

Example

A machine, costing $10,600.00, is depreciated on a straight-line basis (estimated life ten years, estimated scrap value $600.00). At the end of eight years the machine is retired from service and sold for cash, $1,500.00. The entries are

Depreciation Expense—Machinery	1,000.00	
Allowance for Depreciation—Machinery		1,000.00
To record depreciation expense of the eighth year.		
Cash	1,500.00	
Machinery		1,500.00
To record cash received on sale of machine.		
Allowance for Depreciation—Machinery	8,000.00	
Loss on Retirement or Sale of Fixed Assets	1,100.00	
Machinery		9,100.00
To record retirement of machine from service and loss incurred on its sale.		

If the asset had been sold for $3,000.00, the latter two entries would have been modified to read

Cash	3,000.00	
Machinery		3,000.00
To record cash received on sale of machine.		
Allowance for Depreciation—Machinery	8,000.00	
Machinery		7,600.00
Gain on Retirement or Sale of Fixed Assets		400.00
To record retirement of machine from service and gain realized on its sale.		

The accounts Loss on Retirement or Sale of Fixed Assets and Gain on Retirement or Sale of Fixed Assets require brief consideration. Losses and gains realized, when fixed assets are sold or retired, may be due to the use of incorrect rates of depreciation in past accounting periods, to changes in the

market values of the fixed assets retired, to obsolescence, and so on. In line with modern accounting thought, these particular losses and gains should appear on the all-inclusive statement of income of a business. This action is particularly appropriate in cases where the values involved are small; and where losses and gains on the retirement of fixed assets represent a constant activity as is the case in most large manufacturing companies.

PROBLEMS

Problem 24–1. A heavy duty-truck was purchased new on January 1, 19__, for $4,100.00. It was estimated that the truck would have a residual value of about $500.00 at the end of its useful life, which was expected to be about 4 years, or 100,000 miles, whichever came first. On December 31 of the first year, the truck

was 95% efficient,
had a market value of about $3,000.00, and
had been operated 25,000 miles.

Required

What should be the amount of depreciation expense in the first year? What is the accounting propriety of this amount?

Problem 24–2. A machine is purchased for $8,000.00. It is estimated that, at the end of its expected service life of 3 years, the residual or trade-in value of the machine will be $500.00. The operating activity of the machine is expected to be about as follows:

	Estimated Units of Production	*Estimated Working Hours*
1st year	16,000	10,000
2d year	14,000	9,200
3d year	20,000	10,800
	50,000	30,000

Required

Prepare the depreciation entries that might be made in the first year under four methods of determining depreciation expense.

Problem 24–3. The Pomona Manufacturing Company was a small business organized 5 years ago. During this 5-year period, the company had prospered and grown rapidly. Income taxes had taken approximately 50% of the company's taxable income. As its business had grown, the company found it increasingly necessary to carry larger amounts of inventories and accounts receivable, and to make substantial additions to its investment in fixed assets. Because its cash position was generally poor, the financing of its growing business was a constant problem to the company.

Yesterday, the company purchased factory equipment costing $25,-

000.00, paying $5,000.00 down and the balance payable $1,000.00 monthly. The estimated life of the equipment was 4 years. The equipment was expected to be used about as follows:

	ESTIMATED	
	Units of Production	*Working Hours*
1st year	80,000	1,700
2d year	120,000	2,000
3d year	140,000	2,100
4th year	160,000	2,200
	500,000	8,000

Required

1. Prepare schedules of depreciation showing the amount of annual depreciation expense under each of the following methods: (a) straight line, (b) sum of years' digits, (c) production units, (d) working hours, (e) declining balance (as illustrated on page 520), (f) declining balance for 2 years, then straight line for 2 years. (Scrap or residual values may be disregarded.)
2. Which of these methods of recording depreciation expense should be adopted by the Pomona Manufacturing Company? Why?
3. Could the company's policy of depreciation accounting have any possible connection with the company's desire to improve its cash position and with the company's ability to finance its future growth from its own funds? Discuss.

Problem 24–4. The balance sheet of National Brands, Incorporated, as of December 31, 1958, included the following:

Fixed Assets:		
Land, Building, Machinery, and Equipment, including Delivery Equipment	$46,354,507.27	
Less Allowance for Depreciation .	25,296,407.38	$21,058.099.89

Are these fixed assets properly presented on the balance sheet? Explain.

Problem 24–5. A machine costing $12,500.00 is depreciated on a straight-line basis at the annual rate of 20% (estimated scrap value, $500.00). At the end of 3 years the machine is sold for cash, $3,000.00.

What entries should be placed on the books in the third year?

Problem 24–6. At the end of 6 years a machine which originally cost $10,300.00 has been depreciated $6,000.00 (straight-line depreciation). At the end of the seventh year, this machine is traded in for $2,600.00 on the cash purchase of a larger and improved model costing $15,000.00.

What entries should be placed on the books in the seventh year?

Problem 24–7. Exactly 5 years ago today, July 1, a business purchased certain equipment at a cost of $6,600.00. The equipment was estimated to

have a residual value of $600.00. It was depreciated at the annual straight-line rate of 10%.

Today, this equipment is traded in on new equipment whose invoice cost is $8,000.00. A trade-in allowance of $2,000.00 is received on the old equipment, the balance of the purchase price being paid in cash. The new equipment is to be depreciated at the annual rate of 15%.

Required

What entries should be made in the current year, affecting depreciation expense, the equipment account, and its allowance for depreciation account. The books of the business are maintained on a calendar year basis.

Problem 24–8. The condensed balance sheet of the Blank Company on January 1, 19__, is

Assets		*Equities*	
Cash	$ 60,000.00	Common Stock, $100.00 par	$200,000.00
Machinery and Equipment	40,000.00	Retained Income	50,000.00
Other Assets	150,000.00		
	$250,000.00		$250,000.00

The condensed statement of income for the ensuing twelve months is

Sales		$200,000.00
Cost of Sales		100,000.00
Gross Profit		$100,000.00
Selling and General Expenses (paid in cash)	$76,000.00	
Depreciation Expense	4,000.00	80,000.00
Net Profit from Operations		$ 20,000.00

Required

1. Assuming that all business is transacted for cash, and that there are no changes in the balance sheet other than those to recognize the statement of income, construct the balance sheet for December 31, 19__.

2. Suppose that the company adopted the policy of placing all cash in excess of a balance of $50,000.00 in investments of various kinds. Discuss this policy from the long-run point of view.

Chapter 25 DEPRECIATION (Continued)

Plant Ledgers

The Machinery account in the general ledger of a business may represent many machines. When this is the case, the Machinery account may be handled as a controlling account whose details are carried in a subsidiary (or plant) ledger. Similarly, each fixed-asset account in the general ledger may be a controlling account supported by a subsidiary ledger in which detailed information is carried on individual units. Buildings and land should be carried in separate accounts. One is depreciable, the other not.

Each account in a subsidiary plant ledger should be represented by a separate ledger page or plant ledger card for each individual asset. A typical form for this purpose is illustrated on page 534. The reverse side of this form (page 535) may be used for additional information of importance.

A plant ledger (with specially ruled ledger pages) in which fixed assets are carefully classified, has certain advantages:

1. It is important in the effective management and control of property. Detailed information is maintained on each individual fixed asset. Plant cards provide information with respect to the following:
   a) Technical and financial data. Dependable information is available for accounting, tax,[1] insurance, and other purposes.
   b) The distribution of fixed assets within a plant.
   c) Fixed assets available for use, transfer, retirement.
   d) The operating history of each unit. The relative cost of operating

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[1] In Treasury Decision 4422 (1934) it is provided that "the deduction for depreciation in respect of any depreciable property for any taxable year shall be limited to such ratable amount as may reasonably be considered necessary to recover during the remaining useful life of the property the unrecovered cost or other basis. The burden of proof will rest upon the taxpayer to sustain the deduction claimed. Therefore, taxpayers must furnish full and complete information with respect to the cost or other basis of the assets in respect of which depreciation is claimed, their age, condition, and remaining useful life, the portion of their cost or other basis which has been recovered through depreciation allowances for prior taxable years, and such other information as the Commissioner (of Internal Revenue) may require in substantiation of the deduction claimed."

NAME Hoist with Trolley, Yale Electric Chain

DESCRIPTION 4 Ton, A.C., Lift: Standard = 15 ft. Maximum = 45 ft.

SERIAL NUMBER

BOUGHT FROM Carleton Supply Company

LOCATION Dept. 7

OUR TAG NUMBER M 181

TOTAL ESTIMATED DEPRECIATION $1,220.00

ESTIMATED LIFE 10 years

RATE 10 %

REMARKS

DATE	DESCRIPTION	REF.	AMOUNT	CUMULATIVE COST	MEMORANDA				
					Date	Item	Depreciation Reserve Debit	Depreciation Reserve Credit	Book Value
1958					1958				
Jan. 1	Cost	CP2	1,000 00	1,000 00	Dec. 31	Deprec.		122 00	1,148 00
4	Freight	CP3	20 00	1,020 00					
31	Installation	CP5	250 00	1,270 00					

Plant Ledger Card (front)

RECORD OF MAINTENANCE AND REPAIRS

Date	*Remarks*	*Ref.*	*Amount*	*Cumulative Amount*

Plant Ledger Card (back)

fixed assets (like machines) will be recorded in writing. Facts are provided by means of which improved policies of depreciation, repairs, and replacement may be inaugurated.

2. For each group of fixed assets, the total depreciation expense for an accounting period is the sum of the depreciation expense provisions recorded on individual plant ledger cards. When depreciation expense is calculated in this manner, assuming fixed assets to be properly classified, the total depreciation-expense figure for a given accounting period will be a value which can be reasonably relied upon as fair.

3. Periodic statements of income and financial position will be stated more fairly when the values for depreciation expense and the allowance for depreciation accounts are fairly stated.

4. When the values of plant ledgers are classified according to product, department, division, and so on, the proper distribution of depreciation expense to cost objectives is facilitated; and cost accounting values are likely to be more accurate and serviceable.

For any group of fixed assets, the sum of the cost values on individual plant ledger cards should equal the balance of the related controlling account; and the sum of the accumulated depreciation expense values on plant ledger cards should equal the balance in the related allowance for depreciation account.

Depreciation Expense and the Composite Rate Method

Some businesses feel that the periodic computation of depreciation expense for individual units and the recording of depreciation expense values on individual plant ledger cards is a procedure much too costly in terms of the results achieved. Instead, they would compute the provision for a year's depreciation expense by applying fair rates of depreciation against the balances of each fixed-asset controlling account as of the beginning of the accounting period. Alternatively, they would compute a year's depreciation expense as the sum of products obtained by applying fair rates of depreciation against the balances in the various fixed-asset controlling accounts for the length of time the balances were unchanged. These methods are simple and easy to use. Whether or not they provide acceptable values for periodic provisions for depreciation expense depends upon the fairness of the values obtained. An example, using straight-line methods of depreciation throughout, will illustrate.

Example

On December 31, 1958, the Machinery account of the XYZ Company had a balance of $25,000.00. This balance represented the cost of five machines purchased on the dates shown below:

MACHINERY

1957											
Dec.	30			7,000.00							
1958											
Mar.	1			5,000.00							
Aug.	1			4,000.00							
Sept.	1			6,000.00							
Oct.	1			3,000.00							

The straight-line rates of depreciation for these machines were

Machine	*Cost*	*Rate*	
#1	$7,000.00	10%	Average, 10%
#2	5,000.00	9	
#3	4,000.00	11	
#4	6,000.00	8	
#5	3,000.00	12	

The depreciation expense for the year 1958, assuming no residual values for individual units, will be one of the amounts calculated in the following cases:

Case 1

Depreciation expense for 1958 is the sum of the depreciation expense provisions recorded on individual plant ledger cards, thus:

Machine	*Purchased*	*Cost*	*Rate*	*Depreciation Expense*
#1	Dec. 30, 1957	$7,000.00	10%	$ 700.00
#2	Mar. 1, 1958	5,000.00	9	375.00
#3	Aug. 1, 1958	4,000.00	11	183.33
#4	Sept. 1, 1958	6,000.00	8	160.00
#5	Oct. 1, 1958	3,000.00	12	90.00
				$1,508.33

Case 2

Depreciation expense for 1958 is the value obtained by applying the average depreciation rate of 10% against the balance of the Machinery account, January 1, 1958:

$$10\% \times \$7{,}000.00 = \$700.00$$

Case 3

Depreciation expense for 1958 is the sum of products obtained by applying the average depreciation rate of 10% against the changing balance of the account throughout the year:

10% × $ 7,000.00 × 2/12 =	$ 116.67
10% × $12,000.00 × 5/12 =	500.00
10% × $16,000.00 × 1/12 =	133.33
10% × $22,000.00 × 1/12 =	183.33
10% × $25,000.00 × 3/12 =	625.00
	$1,558.33

Of the three computations, the first is the most satisfactory. The second is clearly inadequate, but the third gives approximately the same result as the first. In Case 3 the accuracy is due to the fact that, in this particular instance, the simple average of 10% happens also to be statistically representative. The simple average, however, is not an average which is always statistically acceptable; for this reason it is better, as a general rule, to use a weighted average rather than a simple arithmetic average. Using a weighted average of 9.72% (total annual depreciation expense, $2,430.00,[2] divided by total cost, $25,000.00), the depreciation expense for 1958 would be

9.72% × $ 7,000.00 × 2/12	= $	113.40
9.72% × $12,000.00 × 5/12	=	486.00
9.72% × $16,000.00 × 1/12	=	129.60
9.72% × $22,000.00 × 1/12	=	178.20
9.72% × $25,000.00 × 3/12	=	607.50
		$1,514.70

The method used in Case 2 will give satisfactory results when the balance in a fixed-asset account remains relatively constant throughout an accounting period and when a statistically representative composite depreciation rate is used. In Case 2 and Case 3 it is possible to depreciate individual units for more than 100% of their cost. This is not possible in Case 1. Obviously the choice of method, in a given case, depends upon the facility with which a fair value for depreciation expense can be obtained at reasonable cost. The computation of depreciation expense on individual units, however, accords with accounting theory.

Expenditures Related to Fixed Assets

It is common for businesses to make expenditures more or less regularly on behalf of their fixed assets in order to maintain, or increase, the operating efficiency and life of these assets. Expenditures relating to the fixed assets of a business are of two kinds, those whose values should be recorded as

1. Expense. These are the more or less regularly required ordinary repairs of a business. They are revenue expenditures, i.e., charges against current income.

These expenditures are important not only because of their immediate accounting significance but also because they may have an important influence upon the depreciation accounting of a business. It should be

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[2]

10% × $7,000.00	= $	700.00
9% × $5,000.00	=	450.00
11% × $4,000.00	=	440.00
8% × $6,000.00	=	480.00
12% × $3,000.00	=	360.00
		$2,430.00

borne in mind that the repairs-and-renewals policy of a business is one of the factors (page 515) which enters into the establishment of the periodic provision for depreciation expense.

2. Asset. These are capital expenditures, i.e., charges which should be capitalized by debiting asset accounts.

Ordinary Repairs

The distinction between an ordinary repair and an improvement is not always clear. The U. S. Tax Court has said:

> A repair is an expenditure for the purpose of keeping the property in an ordinarily efficient operating condition. It does not add to the value of property nor does it appreciably prolong its life. It merely keeps the property in an operating condition over its probable useful life for the uses for which it was acquired. Expenditures for that purpose are distinguishable, from those for replacements, alterations, improvements, or additions which prolong the life of the property, increase its value, or make it adaptable to a different use. The one is a maintenance charge, while the others are additions to capital investment which should not be applied against current earnings.[3]

Expenditures for normal, common repairs should be charged against income as ordinary expenses of doing business. These costs may be incurred more or less irregularly and, accordingly, expenditures for repairs may fluctuate considerably from month to month. This fluctuation might even occur by deliberate intent—the result, for example, of a policy of making few repairs during periods of high productivity and of making most of the repairs of a business during periods of low productivity. To the extent that there are fluctuations in the amounts of monthly maintenance costs, there are fluctuations of similar amounts in the monthly values for expense and net income.

Capital Expenditures

Plant and property expenditures of unusual nature or amount should be carefully examined because these expenditures may represent something more than just expense. Fixed assets may actually be significantly improved because of the expenditures made on their behalf. Where this is the case, it is proper for part or all of the expenditure to be capitalized instead of being debited to an expense account. Examples of "capital expenditures" include the following:

1. Replacing an old motor with a new one
2. Repainting the exterior of a building
3. Relining a furnace or kiln

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[3] 4 BTA 103.

4. Replacing a cedar shingle roof with a metal roof
5. Laying composition flooring over an old and worn wood floor
6. Installations to improve the acoustics of an auditorium
7. Installations to reduce the noise of an office
8. Remodeling and modernizing a building
9. Overhauling the motor of an automobile

Broadly reviewed, these expenditures for replacements and improvements present several questions of accounting importance:

1. To what extent should such expenditures be capitalized?
2. When a part is replaced, what values should be cleared from the fixed-asset and allowance for depreciation accounts?
3. If capitalized, how should these values be written off?
4. What is the effect of these expenditures upon the general depreciation accounting of a business?

Such questions are not easily answered. Whether or not plant expenditures should be capitalized depends upon knowing whether or not the fixed asset affected by the expenditure has become more valuable than before in terms of increased efficiency or extended life. Certainly no objection should be raised against capitalizing a reasonable amount of an expenditure when it is indisputably certain that the expenditure has resulted either in a significant increase in the operating efficiency of an asset or in an increase in the estimate of the useful life of the asset. The amount to be capitalized and its proper accounting disposition are often problems in themselves. These problems are discussed in later pages of this chapter.

Two methods of handling expenditures for replacements and renewals are described below.

Example 1

After 6 years of use, a machine, depreciated at the straight-line rate of 10% annually, appeared on the books of a company as follows:

MACHINES		ALLOWANCE FOR DEPRECIATION —MACHINES	
10,000.00			6,000.00

One of the component parts of this machine, originally costing $3,000.00, is now replaced by an improved unit costing $4,000.00. This replacement was not expected to affect the original estimate of 10 years of useful life for the machine. The following entries should be made:

Allowance for Depreciation—Machines	1,800.00	
Loss on Retirement or Sale of Fixed Assets	1,200.00	
Machines		3,000.00
To remove book value of replaced unit from the Machines account. Original cost, $3,000.00; 6 years' depreciation, $1,800.00.		

Machines	4,000.00	
Vouchers Payable		4,000.00

To record cost of new replacement unit.

In the *seventh* year, the depreciation expense entry would be:

Depreciation Expense—Machines	1,700.00	
Allowance for Depreciation—Machines		1,700.00

To record depreciation expense of the 7th year:

Machines account, cost	$11,000.00
Allowance for Depreciation	4,200.00
Machines, at net book value	$ 6,800.00
Years of estimated remaining life	÷ 4
	$ 1,700.00

Note: An alternative explanation for this entry would be

$7,000.00 ÷ 10 =	$ 700.00
4,000.00 ÷ 4 =	1,000.00
	$1,700.00

At the end of 7 years, the accounts will be

MACHINES

10,000.00	3,000.00
4,000.00	

ALLOWANCE FOR DEPRECIATION—MACHINES

1,800.00	6,000.00
	1,700.00

DEPRECIATION EXPENSE—MACHINES

1,700.00	

The accounting of Example 1 is summarized as follows:

1. Clear the net book cost of the part replaced from the accounts.
2. After this cost has been removed, that part of original cost still remaining on the books should continue to be depreciated according to the depreciation method and schedule previously in use (assuming no change in the original estimate of the useful life of the asset).
3. Any new value capitalized should be depreciated over the remaining years of asset life.

In Example 1 the funds expended for the replacement exceeded the original cost of the part replaced. This is a common type of transaction. The proper accounting for this type of transaction is a matter of considerable importance because of the higher prices which generally prevail today. In accounting for a replacement, the expenditure should be handled by eliminating the net book cost of the old unit and recording the cost of the new unit—two distinct accounting transactions. Even though the net book cost of the old unit may not be readily or precisely determinable from the records of a business, this net book cost can be closely estimated.

The amount to be capitalized in a replacement expenditure can be held within reasonable bounds by recognizing that, since a new part has "going value" only when it is functioning as one of the units of a whole, the amount to be capitalized should not exceed the invoice cost of the new replacement part.

Example 2

In lieu of the accounting of Example 1—which accords with accounting theory—it is rather common practice in both business and income tax accounting

to handle the expenditure as a debit to the Allowance for Depreciation account, and
not to remove the net book value of the old part from the accounts.

After giving effect to this accounting, the new net book value of the depreciable asset is written off over the asset's remaining years of life. The entries, to illustrate, would be

Allowance for Depreciation—Machines	4,000.00	
Vouchers Payable		4,000.00
To record cost of new replacement unit.		

The accounts of immediate interest will be:

MACHINES		ALLOWANCE FOR DEPRECIATION —MACHINES	
10,000.00		4,000.00	6,000.00

In the *seventh* year, the depreciation expense entry would be

Depreciation Expense—Machines	2,000.00	
Allowance for Depreciation—Machines. . . .		2,000.00
To record depreciation expense of the 7th year:		

Cost	$10,000.00
Allowance for Depreciation	2,000.00
Net book value	$ 8,000.00
Years of life remaining.	÷ 4
Depreciation expense	$ 2,000.00

At the end of 7 years, the accounts will be:

MACHINES		ALLOWANCE FOR DEPRECIATION —MACHINES		DEPRECIATION EXPENSE —MACHINES	
10,000.00		4,000.00	6,000.00 2,000.00	2,000.00	

Although the accounting method of this example is widely used, it really is not accurate. For one thing, the amount of annual depreciation expense in the seventh and succeeding years, $2,000.00, is overstated. This contrasts with the allocation of cost as calculated in Example 1, $1,700.00. Second, the accounting method of Example 2 results in a misrepresentation of the cost of fixed assets and of the allowance for depreciation. Specifically, it concludes by reporting a $10,000.00 machine as being 40% depreciated

whereas, as shown by Example 1, the current investment in the machine is $11,000.00, 53.6+% depreciated.

Question

In Example 1, what should be done if, because of the expenditure of $4,000.00, the machine was estimated to have a probable remaining service life of 8 years (instead of 4)? In this case the proper accounting entries would be

Allowance for Depreciation—Machines	1,800.00	
Loss on Retirement or Sale of Fixed Assets	1,200.00	
Machines		3,000.00
To remove book value of replaced unit from the Machines account. Original cost, $3,000.00; 6 years' depreciation, $1,800.00.		
Machines	4,000.00	
Vouchers Payable		4,000.00
To record cost of new replacement unit.		

In the *seventh* year, the depreciation expense entry would be:

Depreciation Expense—Machines	850.00	
Allowance for Depreciation—Machines		850.00
To record depreciation expense of the 7th year:		

Machines account, cost	$11,000.00
Allowance for Depreciation	4,200.00
Machines, at net book value	$ 6,800.00
Years of estimated remaining life. . . .	÷8
	$ 850.00

In business and income tax accounting, however, the expenditure of $4,000.00 would generally be debited to the Allowance for Depreciation account on the theory that the investment in the asset has been increased and that some of the accrued depreciation on the books has been canceled. Accordingly, under this accounting, the depreciation entry of the seventh year would be

Depreciation Expense—Machines	1,000.00	
Allowance for Depreciation—Machines . . .		1,000.00
To record depreciation expense of the 7th year:		

Machines account	$10,000.00
Allowance for Depreciation	2,000.00
Machines, at net book value	$ 8,000.00
Years of estimated remaining life. . .	÷8
	$ 1,000.00

This accounting—that of charging major expenditures for replacements and extraordinary repairs to the Allowance for Depreciation account—should be avoided because, as pointed out on page 542, it really is not accurate as to accounting values for both the depreciable asset and the periodic depreciation expense. In view of its wide use, however, it is proba-

ble that this accounting method can be respected if, in the opinion of professional accountants, the financial statements of a business are *fairly* stated.

If a capital expenditure is like the fifth one listed on page 540—laying a composition flooring over an old and worn wood floor—the cost of the new flooring should be added to the Building account. The net book cost of the old flooring should be eliminated from the accounts even though the old flooring were not removed. This would be proper on the theory that the old flooring was left in place because the cost of removing it was not worth while. However, it would be reasonable to eliminate something less than 100% of the net book cost of the old flooring if retention of the old flooring made the new flooring job more satisfactory (because of the insulation qualities afforded by the old flooring, for example).

If expenditures for the improvement of fixed assets do not involve the physical elimination of any significant elements of an existing property, the cost of the improvements—like a major motor overhaul, for example—should be capitalized and written off over the future accounting periods expected to be benefited by the expenditure. Again, it is rather common practice in both business and income tax accounting to debit the cost of improvements of this nature against the allowance for depreciation account. The new net book value of the depreciable asset is then written off over the remaining years of life of the asset.

"Capital and Revenue" Expenditures

A commentary on repairs, replacements, renewals, betterments, and plant-and-property expenditures generally, would not be complete unless attention had been directed to the importance of correctly distributing the values of these expenditures to the asset and expense accounts of a business. If an expenditure is improperly capitalized instead of being charged to expense, the net income of the business for the period in which the expenditure was incurred would be overstated as would also be the asset and net worth values of the balance sheet. (This assumes an assigned annual depreciation rate of less than 100% for the value improperly capitalized.) On the other hand, if expenditures are improperly charged to expense instead of being capitalized, the net income of the business (for the period in which the expenditure was incurred) would be understated, as will also be the asset and net worth values of the balance sheet. Future statements of income, too, will have their values for net income overstated because of the omission of depreciation expense properly assignable to the periods represented by these statements.

When qualified opinion is doubtful as to the proper classification of an expenditure, it is conservative accounting to charge the expenditure to expense. A value should be capitalized only when there is positive assurance

that the benefits of an expenditure will carry over to future periods of accounting.

Many companies follow a policy of refusing to capitalize any expenditure amounting to less than a minimum figure, say $25.00, $50.00, $100.00, or more, depending upon the characteristics of a business. Larger amounts are carefully examined. Practical considerations indicate that an accounting policy of this kind has much to recommend it.

Depreciation Expense: Adjustments Required Because of Revised Estimates of Fixed-Asset Life

In the light of subsequent information, a business may find that its depreciation accounting has not been quite accurate because of error present in original estimates of the useful life of fixed assets. It may be found, for example, that an asset will have a longer service life than was originally estimated. What should be done when this information is discovered? This question may be answered in two ways:

1. Current provisions for periodic depreciation expense should be determined in the light of the new information. For example, a machine was purchased at a cost of $10,600.00 and was depreciated at the rate of 10% annually. (Estimated scrap value, $600.00.) At the end of 6 years of life, the accounts were as follows:

MACHINE	
10,600.00	

ALLOWANCE FOR DEPRECIATION—MACHINE	
	6,000.00

On January 1 of the seventh year, it is estimated that the asset will have a total useful life of 12½ years. This information means that the allocation of total depreciation expense, $10,000.00, to each accounting period is properly $10,000.00 ÷ 12½ = $800.00.

This means, in turn, that the Allowance for Depreciation account should be adjusted so that it will have a balance equal to 6 years of depreciation at $800.00 annually, or $4,800.00. The entry for the adjustment would be

Allowance for Depreciation—Machine	1,200.00	
Adjustment of Prior Years' Depreciation Expense		1,200.00
To adjust Allowance for Depreciation account so as to agree with revised estimates of fixed asset life: from 10 years to 12½ years.		
Depreciation expense recorded in 6 years . .	$6,000.00	
Depreciation expense that should have been recorded: 6 × $800.00	4,800.00	
Excess depreciation expense recorded in 6 years	$1,200.00	

The governing principle for an adjusting entry of this kind should be that of making fair periodic allocations of the original cost of a fixed asset. This is a process of properly matching costs against incomes, i.e., *fairly* determining costs for purposes of the financial statements of a business.

The credit value of $1,200.00 would appear in the statement of income as a special credit to income.

The depreciation expense entry of the seventh and succeeding years would be

Depreciation Expense—Machine	800.00	
Allowance for Depreciation—Machine		800.00
To record depreciation expense for 19__.		

Note: In this example, the problem has dealt with an overstatement of depreciation expense in the early years of the life of an asset. If, under other circumstances, there had been an understatement of depreciation expense, the entry for the adjustment would be, pro forma,

Adjustment of Prior Years' Depreciation Expense . . .	xxx xx	
Allowance for Depreciation—Machine		xxx xx
To adjust Allowance for Depreciation account so as to agree with revised estimates of fixed-asset life: from 10 years to __years.		

The debit value of this entry would appear in the statement of income as a special debit to income.

There are several advantages in the use of this method:

Future provisions for periodic depreciation expense will be stated more fairly. Each future accounting period will be charged with its fair share of the depreciable cost of an asset.
Periodic net income of the future will be stated fairly in so far as the factor of depreciation expense is concerned.
Depreciable fixed assets will be valued fairly in the balance sheet.
It accords with accounting theory.

2. An alternative method is that of *not* adjusting the balance of the Allowance for Depreciation account. Instead, the amount of each provision for depreciation expense for future accounting periods is determined by dividing the depreciable net book value of a fixed asset by the number of years of remaining asset life. For example, using the data of the machine problem on page 545,

$10,600.00	Original cost
6,000.00	Allowance for depreciation (at end of 6th year)
$ 4,600.00	Net book value (at end of 6th year)
600.00	Estimated scrap value
$ 4,000.00	Undepreciated cost
÷ 6½	Years of remaining asset life
$ 615.38	Annual depreciation expense

The depreciation expense entry of the seventh and succeeding years would be

Depreciation Expense—Machine	615.38	
Allowance for Depreciation—Machine		615.38
To record depreciation expense for 19__.		

In practice this second method is more widely used than the first, and for several reasons:

The first method is not acceptable for income tax purposes.

Managements are reluctant to reassign any recorded depreciation expense to future accounting periods, especially when the effect upon net income is not significant.

Managements are willing to make significant reallocations of original cost by using revised provisions for depreciation expense for future periods of accounting in the manner illustrated immediately above.

Depreciation Expense: Is It Affected by the Market Values of Fixed Assets?

Depreciation expense is the loss in the service value of a fixed asset—a loss expressed in dollars—caused by the several factors which will ultimately compel the asset to be retired from service. Depreciation expense is the consumption of the original capital invested in an asset. The depreciation of fixed assets is an expense which is not related to the varying market values which fixed assets may command from time to time.

It is sometimes stated that the necessity for recording depreciation expense is eliminated when the increase in the market value of depreciable property equals, or more than equals, the depreciation expense which would otherwise be recorded for an accounting period.

This is an erroneous view. It is not proper to offset depreciation expense against a rise in market value for the following reasons:

1. Depreciation expense is an actual, incurred cost of doing business. It cannot be avoided. A rise in market value, on the other hand, is not an actual profit because the so-called "profit" is one which has not been realized. It would be unsound to offset an actual expense against a contingent gain—a gain which, at best, is quite unrelated to the operating costs of a business. It would be wholly illogical to offset values which are dissimilar in character and which have no relationship to each other. It would be just as logical to offset an increase in the market value of investment securities against the expense of taxes.

2. A rise in market value does not arrest wear and tear upon a property.

3. Since depreciation expense represents an actual conversion of asset value into an expense value, the omission of depreciation expense for one accounting year can only mean a heavier absorption of depreciation

in a subsequent year or years. Costs and net incomes on statements of net income would not be *fairly* stated.

4. If the profits of a business are to be determined fairly, and if the integrity of capital is to be maintained, the provision for depreciation expense is imperative. It is a provision which records the *fact* of incurred depreciation expense. A rise in market value may never be realized.

5. A decline in market value does not normally involve an increase in the provision for periodic depreciation expense because the accounting value of a fixed asset to a business does not move up and down in sympathy with market movements. There is a clear line of demarcation between market prices, their fluctuations, and the fact of depreciation.

Obsolescence

Obsolescence has already been referred to as one of the causes of depreciation. It is one of the components of the estimate of useful life. It enters, therefore, into the determination of the amount of the periodic provision for depreciation expense. This might seem to carry with it the implication that obsolescence, per se, is a known and measurable factor. Usually though, this is not the case. Obsolescence is generally an uncertain consideration. It is usually difficult to state whether or not obsolescence will occur and still more difficult to specify *when* and to *what extent*. Obsolescence in greater or lesser degree may occur suddenly and unexpectedly, it may occur in the near or distant future or at any point between, and it may never occur. As a general rule it may be said that obsolescence normally carries little practical weight in the determination of the periodic provision for depreciation expense.

PROVISION FOR OBSOLESCENCE When the factor of obsolescence becomes a consideration real enough to compel a revision of the original estimate of the useful life of a fixed asset, it should be recognized by increasing the periodic provision for depreciation expense. The amount by which former charges for depreciation expense have been inadequate should be made a special debit to income in the statement of income by an entry similar to that illustrated on page 546.

Occasionally a management may wish to recognize the possibility of obsolescence even though obsolescence may not currently be a definite factor of importance. This desire to "play safe" and to maintain the fairness of financial statements may be satisfied by appropriating or earmarking a part of the Retained Income (or Earned Surplus) account, thus:

Retained Income (or Earned Surplus)	xxx xx	
Reserve for Contingencies		xxx xx
To provide for the contingency of obsolescence as authorized by the board of directors, _____ 19__.		

The frequency of this entry, and the amount or amounts to be appropriated are decisions resting with a company's board of directors. The important thing about an entry of this kind is that a part of Retained Income (or Earned Surplus) has been set aside and "appropriated," so to speak, as a provision for the contingency of obsolescence. The amount which has been appropriated is still true retained income (or earned surplus), but it is not a value which is free in the sense that it is available for dividends. And important, also, is the fact that with this act of appropriation, the statement of income and the balance sheet of a business continue to be stated *fairly*.

If, at some later date, it is decided that the provision for obsolescence is no longer required, the amount appropriated may be debited to the Reserve for Contingencies account and credited to the Retained Income (or Earned Surplus) account. The amount in question then becomes "free" and available for dividend purposes.

PROBLEMS

Problem 25–1. The Red Line Transit Company purchased the following new motor busses on January 1, 1956:

6 at $10,000.00.	Estimated life, 7 years each.	The weighted average estimate of useful life for these 20 busses was 6.16 years.
4 at $6,000.00.	Estimated life, 6 years each.	
10 at $4,000.00.	Estimated life, 5 years each.	

For depreciation accounting purposes, the residual values of these motor busses were to be disregarded. Each bus was expected to be operated about 100,000 miles.

Required

Assuming Straight-Line Depreciation

1. What is the depreciation entry for the first year?
2. On December 31, 1958, two of the $4,000.00 busses were retired from service. What entry should be made?

Assuming a Mileage Basis for Depreciation

3. What are the depreciation entries for 1956, 1957, and 1958? (Average mileage per bus: 1956, 22,000 miles; 1957, 26,000 miles; 1958, 24,000 miles.)
4. On December 31, 1958, two of the $4,000.00 busses were retired from service. What entry should be made?

Problem 25–2. On January 1, 1953, a purchase of certain factory equipment was made at an invoice cost of $10,000.00. The equipment, whose estimated life was 10 years, was depreciated on a straight-line basis. On December 31, 1958, the equipment was traded in on new and improved equipment whose invoice cost was $12,000.00. Payment of the invoice was

made by cash, $9,000.00, and a trade-in allowance on the old equipment, $3,000.00.

Required

What entries should be recorded in 1958?

Problem 25–3. The Wayne Company depreciated its factory equipment by using an annual composite group rate of 10%. On December 31, 1958, its factory equipment appeared on the books as follows:

FACTORY EQUIPMENT

1954	*Unit*	*Life*	
Jan. 1	A	5 years	6,000.00
	B	10 "	10,000.00
	C	15 "	24,000.00

ALLOWANCE FOR DEPRECIATION—FACTORY EQUIPMENT

Dec. 31, 1954	4,000.00
Dec. 31, 1955	4,000.00
Dec. 31, 1956	4,000.00
Dec. 31, 1957	4,000.00
Dec. 31, 1958	4,000.00

Required

1. Unit A was retired from service on December 31, 1958. What entry should be made?
2. If unit A had been retired from service on December 31, 1957, what entry should have been made?

Problem 25–4. A fixed asset, costing $15,000.00, was estimated to have a serviceable life of 10 years and an estimated residual value of $600.00. No depreciation expense was recorded for nearly 5 years. At the end of the fifth year, it is decided that the books should be adjusted by recording all accumulated depreciation to date.

Required

What entry should be made?

Problem 25–5. At the end of 4 years of ownership, Machine #1 appeared on the books of a company as follows:

MACHINE #1
(10-*year life, residual value,* $1,200.00)

21,200.00

ALLOWANCE FOR DEPRECIATION—MACHINE #1

8,000.00

At the beginning of the fifth year of life, it is found necessary to replace the grinding unit (original cost, $5,000.00) of this machine with a new unit costing $5,500.00.

Required

1. What entries should be made at the beginning of the fifth year?
2. What is the depreciation-expense entry for the fifth year? There was no change in the estimated life of the asset.

Problem 25–6. The following account appeared on the ledger of the Summit Manufacturing Company, December 31, 1958:

DRAW PRESSES

(*Estimated life*, 8 *years; scrap value*, $500.00)

1952 Jan. 1	20,500.00		

ALLOWANCE EOR DEPRECIATION—DRAW PRESSES

		1958 Jan. 1 Balance	15,000.00

MAINTENANCE EXPENSE

1958 Jan. 2	2,500.00		

The bookkeeper was uncertain about the debit in the Maintenance Expense account. He stated that the funds expended represented a major improvement of the draw presses. As a result of this improvement, the life of the draw presses was extended an additional 2 years.

Required

What is the depreciation-expense entry for 1958?

Problem 25–7. The Emerson Manufacturing Company bought a machine on January 1, 1950, for $10,000.00. (Expected life, 10 years; scrap value, $400.00.) On January 1, 1958, a major repair of $4,080.00 is made on this machine. This repair is expected to extend the life of the machine by an additional 3 years.

Required

1. What entry should be made to record the disbursement of $4,080.00?
2. What is the entry for depreciation expense in 1958?

Problem 25–8. The Service Manufacturing Company purchased a machine on January 1, 1952, for $5,000.00. (Expected life, 10 years; scrap value, $200.00.) On January 1, 1958, it is found that the machine will last but 2 years more.

Required

1. Should any entry be made because of this change in estimated life? If so, what is the entry?
2. What is the depreciation-expense entry for the year 1958?

Problem 25–9. The following information relates to the Machinery account of the Claremont Company:

January 1, 1951: A machine is purchased for cash, $10,200.00. (Estimated life, 10 years; scrap value, $200.00.)
January 1, 1956: The remaining life of the machine is estimated at three years.
January 1, 1957: A major repair, costing $1,000.00, is made. This repair was expected greatly to improve the operating efficiency of the machine for the next 2 years although the remaining estimated life of the machine was not affected.
December 31, 1958: The machine is sold for cash, $500.00.

Required

What entries should be made each year in connection with the above information?

Problem 25–10. On January 1, 1958, the cash balance of the ABC Company was $100,000.00, an amount normally needed to meet the usual requirements of the company's business. During 1958 the disbursements of the company for fixed assets amounted to $60,000.00. Its statement of income for 1958 showed a net income of $100,000.00 (after a deduction for depreciation expense, $25,000.00). This net income of $100,000.00 was realized in cash.

On December 31, 1958, the net worth of the company was common stock, $1,000,000.00 ($100.00 par); retained income, $250,000.00.

Required

On the basis of the company's cash balance and retained income, December 31, 1958, what amount of dividends might prudently be declared by the company for the year 1958? No dividends have yet been paid in 1958.

Problem 25–11. You are given the following condensed trial balance of Davis & Company, December 31, 19__:

Cash	$ 252,750.00	
Accounts Receivable	150,000.00	
Inventory	100,000.00	
Equipment and Sundry Fixed Assets	105,000.00	
Allowance for Depreciation		$ 63,000.00
Accounts Payable		50,000.00
Common Stock, $100.00 par		100,000.00
Dividend Payable in Common Stock		100,000.00
Retained Income		200,000.00
Sales		500,000.00
Cost of Sales	300,000.00	
Selling and General Expenses	100,000.00	
Depreciation Expense	5,250.00	
	$1,013,000.00	$1,013,000.00

It is your opinion that the annual rate of 5% used by the company to record its depreciation expense is inadequate. You decide that the over-all life of the company's fixed assets is 15 years. Accordingly, you prepare financial statements giving effect to the new rates for depreciation.

Income taxes for the current year are estimated at $45,000.00.

Required

1. Statement of income for the year 19__.
2. Balance sheet, December 31, 19__.

Problem 25–12. The Durox Company prepared the following condensed balance sheet, December 31, 1957:

Cash	$ 40,000.00	Accounts Payable	$ 8,000.00
Machinery	30,000.00	Common Stock, $100.00 par	100,000.00
Allowance for Depreciation—Machinery	(10,000.00)	Retained Income	12,000.00
Sundry Assets (nondepreciable)	60,000.00		
	$120,000.00		$120,000.00

The machinery was purchased on January 1, 1953, and it was subsequently depreciated on the straight-line method, 6⅔% annually. On January 1, 1958, the efficiency of the machinery on hand was much improved by important repairs costing $2,000.00. It was estimated that the life of the machinery was extended an additional 5 years by these repairs.

Required

1. What entries should be made in 1958 affecting the depreciation accounts?
2. Prepare a balance sheet, December 31, 1958. The statement of income for 1958 showed a net income of $20,000.00. All business was transacted on a cash basis. No dividends were paid during 1958. Except for net income, no entries were made in the Retained Income account in 1958. For the purpose of this requirement, assume that the values for Sundry Assets and Accounts Payable remain unchanged.

Problem 25–13. The incomplete trial balance of Electromat Analysts, Inc., on December 31, 1957, was

Cash	$	
Machines and Equipment	56,000.00	
Allowance for Depreciation		$
Accounts Payable		12,000.00
Common Stock, $100.00 par		100,000.00
Retained Income		20,000.00
Sales		125,000.00
Cost of Sales	83,000.00	
Selling Expenses	14,000.00	
Depreciation Expense	5,600.00	
General Expenses	10,400.00	
	$	$

Depreciation expense for the year 1957 has been recorded—based on original estimates of useful life. The machines and equipment were purchased as follows: $36,000.00 on July 1, 1951, and $20,000.00 on December 31, 1954. On the dates of purchase, the fixed assets were estimated to have a life of 10 years. Residual values were disregarded.

You are to complete the trial balance by inserting the correct balance for the Allowance for Depreciation account; and by debiting Cash for an amount sufficient to bring the trial balance into balance. There were no inventories or receivables.

After the trial balance has been established, it should then be adjusted so as to give effect to the following newly discovered additional information:

The machines and equipment purchased July 1, 1951, were estimated to have a revised life of 8 years.

The machines and equipment purchased December 31, 1954, were estimated to have a revised life of 12½ years.

Also, there is on hand an unrecorded and unpaid invoice, dated December 30, for $4,050.00 covering a major repair to certain machines. The effect of this repair was that of greater efficiency for the next several years.

Required

1. Statement of income for the year 1957.
2. Balance sheet, December 31, 1957.

Note: Use a work sheet in the preparation of these statements.

Problem 25–14.

Oswego Manufacturing Company

TRIAL BALANCE, DECEMBER 31, 19__

Cash	$ 28,401.00	
Accounts Receivable	50,000.00	
Finished Goods	30,000.00	
Work in Process	28,000.00	
Raw Materials	17,000.00	
Factory Equipment	60,000.00	
Allowance for Depreciation—Factory Equipment		$ 0.00
Office Equipment	12,000.00	
Allowance for Depreciation—Office Equipment		3,000.00
Vouchers Payable		25,000.00
Common Stock, 10,020 shares no par		101,715.00
Retained Income		60,686.00
Sales		240,000.00
Purchases	75,000.00	
Direct Labor	40,000.00	
General Factory Expense	10,000.00	
Indirect Labor	15,000.00	
Selling Expense	40,000.00	
General Expense	25,000.00	
	$430,401.00	$430,401.00

Entries to cover the following information have yet to be recorded:

1. Depreciation expense on office equipment, $1,000.00.
2. Depreciation expense on factory equipment, estimated at 10% annually although no depreciation has ever been recorded on these assets. The equipment is now 52 months old.
3. A dividend of 40%, payable in common stock (4 shares for each 10 shares outstanding) was declared by directors on December 31, 19__. This dividend will be paid in January.
4. Inventories, December 31, 19__: finished goods, $42,000.00; work in process, $20,000.00; raw materials, $25,000.00.

Required

1. Statement of income for the year 19__.
2. Balance sheet, December 31, 19__.
   Note: Use a work sheet in the preparation of these statements.

Problem 25–15.

Erie Manufacturing Company

TRIAL BALANCE, DECEMBER 31, 19__

Cash	$270,000.00	
Accounts Receivable	150,000.00	
Finished Goods	33,000.00	
Work in Process	31,000.00	
Raw Materials	20,000.00	
Delivery Equipment	3,200.00	
Factory Equipment	60,000.00	
Allowance for Depreciation—Factory Equipment		$ 10,000.00
Office Equipment	12,000.00	
Allowance for Depreciation—Office Equipment (annual rate, 8⅓ %)		3,000.00
Vouchers Payable		50,000.00
Common Stock, 10,000 shares no-par		102,800.00
Dividend Payable in Common Stock, 15,000 shares		150,000.00
Retained Income		250,000.00
Sales		231,400.00
Purchases	80,000.00	
Direct Labor	42,000.00	
General Factory Expense	12,000.00	
Indirect Labor	17,000.00	
Selling Expense	43,000.00	
General Expense	24,000.00	
	$797,200.00	$797,200.00

No depreciation expense for the current year has been recorded. With reference to depreciation, you find that the delivery equipment was purchased new on June 30 of the current year (estimated life, 4 years). On the date of the above trial balance the remaining life of the office equipment was 8 years. In past years, factory equipment was depreciated at the annual

rate of 5% but it is now found that the correct depreciation rate is 10%. (Use straight-line depreciation, and disregard scrap values.)

New inventories on December 31, 19__: finished goods, $45,000.00; work in process, $25,000.00; raw materials, $30,000.00.

The company's income taxes for the year are estimated at $11,000.00.

Required

1. Statement of income for the year 19__.
2. Balance sheet, December 31, 19__.

Problem 25–16. A fixed asset, whose original estimate of useful life was 15 years, is now fully depreciated on the books of a business. At the beginning of the sixteenth year, the asset is expected to be useful for an additional 5 years. How should these facts be handled in the company's accounts and financial statements?

Problem 25–17. Company A began business in 1954 and, at that time, purchased several model X machines at a cost of $7,000.00 each. Company B entered the same productive field in 1958 but its model X machines cost $10,000.00 each, because of the higher prices prevailing in that year. Except for certain minor improvements, the model X machines of Company B were identical with those of Company A. The life of a model X machine was estimated at 10 years.

From the standpoint of cost, as it is determined by annual provisions for depreciation expense, do both companies have the same production costs?

If prices for the companies' products are based on these production costs, which of the two costs will be used to establish sales prices in the open market if competition is exceedingly keen? If competition is not keen?

Which company is better situated competitively?

Problem 25–18. Are the following statements true or false? Why?

1. The annual provision for depreciation expense is an entry that must be made in order to provide for the replacement of a depreciable fixed asset when it is retired from service.
2. The annual provision for depreciation expense is a sum of money set aside for the replacement of depreciable fixed assets.
3. An entry to record depreciation expense should never be made if a business is not earning a gross profit on its sales.
4. The recording of depreciation expense on an asset always means that there has been a concurrent reduction in the efficiency of the asset.
5. Depreciation is not an actual accounting expense if the fixed asset to which it refers is maintained in first-class operating condition.
6. The value assigned to the Depreciation Expense—Building account for a particular period is an estimated value.
7. Depreciation expense should be computed upon the cost of replacement.

8. Depreciation expense, for successive accounting periods, is never affected by changes in the rate of use of depreciable fixed assets.

9. The periodic provision for depreciation expense is never affected by expenditures for maintenance.

10. Because it is an appropriation of some of the profits of a business, the provision for depreciation expense is similar to an appropriation of retained income.

11. Assuming no changes to occur in the rate of manufacturing activity, the annual provision for depreciation expense for a factory should be more in years when profits are large than in years when profits are small.

12. Instead of charging periodic operations with provisions for estimated depreciation expense which may be too small or large, it is better business policy to wait until the date of retirement or sale (of a fixed asset), at which time the exact amount of cumulative depreciation expense can be determined and a debit made to Retained Income for all depreciation expense incurred to date.

13. The allowance for depreciation account represents an opinion as to the amount of shrinkage which has occurred in the gross book value of an asset because of depreciation.

14. The allowance for depreciation account is a fund with which new fixed assets may be purchased.

15. The allowance for depreciation account should be established on the principle that the amount finally accumulated in the account should be equal to the replacement cost of the depreciable asset.

16. A credit to an allowance for depreciation account is made for the same basic reason that a credit is made to the account Prepaid Rent.

Chapter 26 DEPLETION

Introduction

Wasting assets, such as mineral deposits and oil wells, decline in their accounting values concurrently with the continuance of extractive operations on these properties. For example,

a coal mine declines in value as coal is mined,
an oil well declines in value as oil is extracted, and
forest land declines in value as timber is cut.

In each of these cases there is a consumption of capital proportionate to the quantity of product mined, extracted, or cut. The term "depletion" is applied to this special type of value consumption or expiration.

Depletion is not depreciation. Depreciation expense represents the consumption of the services of a depreciable asset. Depletion expense represents the extraction or consumption of a natural resource. In some detail, the difference between depletion and depreciation is brought out in the following comparison:

Depletion	*Depreciation*
1. Depletion measures the consumption of the capital invested in a natural resource.	1. Depreciation measures the consumption of the capital invested in plant, equipment, and like agents used in operations.
2. Depletion occurs only when and if extractive operations are carried on.	2. Depreciation usually occurs whether or not operations are carried on.
3. An asset subject to depletion is one which is directly consumed, i.e., the consumption of value is physical.	3. An asset subject to depreciation is one which is indirectly consumed, i.e., the consumption of value is not physical but, instead, is a consumption of service value.
4. An asset subject to depletion becomes quantitatively smaller as it is mined or cut.	4. An asset subject to depreciation does not generally become smaller in size as it loses value. Commonly the asset remains physically as large as ever.

5. An asset subject to depletion, as a practical matter, cannot usually be replaced directly. It is not usually intended that the extracted asset shall be replaced inasmuch as the object of extractive operations is to remove oil, coal, gas, or the like, for the purpose of profitable sale.

6. The product which has been extracted is the "stock in trade" of the extractive enterprise and, as such, is intended for sale.

5. An asset subject to depreciation may usually be replaced without difficulty. Replacement of machines, automobiles, and the like, is usually intended.

6. An asset which is subject to depreciation is not intended for sale. It is *not* stock in trade. It is a fixed asset used in carrying on the operations of a business.

From this comparison it should be clear that depletion and depreciation are two distinct kinds of revenue costs. Provisions for depletion and depreciation expenses, therefore, are always separately accounted for on the books of a business.

Importance of Recording Depletion Expense

In order to determine the amount of net income earned by a business employing assets subject to depletion, not only must the usual expenses of operation be deducted from gross revenues but also a value representing the provision for depletion expense. This is necessary because a part of the sales price of the product sold (by a business engaged in extractive operations) represents a return of part of the capital invested in assets subject to depletion. A part of each dollar received from the sale of copper, lead, or zinc, for example, represents a partial return of the capital invested in the property containing the copper, lead, or zinc. A part of the original investment in the property has been recovered in the sales price of the product sold. Because there can be no profit until the capital invested in a wasting asset has been recovered, a provision for depletion expense must be recorded as one of the revenue costs of an accounting period. The profit realized by a business engaged in extractive operations is sales minus the cost of the extracted product sold and minus, also, operating expenses. The provision for depletion expense is a part of the cost of sales and, as such, must be recognized if the net income of an accounting period is to be determined fairly.

SUMMARY A provision for depletion expense is important for the following reasons:

1. If the statement of income and the balance sheet of a business engaged in extractive operations are to be fairly stated, an adequate provision must be made for depletion expense.

2. A provision for depletion expense is necessary to guard against an impairment of invested capital which might unwittingly occur because of managerial policies based upon income statements whose net incomes were overstated because provisions for depletion expense were missing or inadequate.

3. A charge for depletion expense for a mining company parallels a charge for purchases for a merchandising business and the raw-material cost of the finished goods produced by a manufacturing company. Depletion expense, for a business engaged in extractive operations, is the same kind of *revenue cost* as purchases for a business engaged in nonextractive operations.

4. The dividend disbursements of a company engaged in extractive operations should be identified as dividends being paid from earnings or from capital (i.e., so-called depletion funds).

The Amount of the Provision for Depletion Expense

In order to determine the amount of depletion expense to be charged to operations over the life period of extractive operations, three factors must be considered:

1. The original cost of the asset subject to depletion must be established. This cost includes all costs incurred preparatory to the commencement of extractive operations on a commercial basis.

2. The net residual value of the asset should be established for the date marking the end of extractive operations. This value is important when the residual value—like the value of surface land, for example—is significant. When the residual value of the asset is not significant it is rather common, in practice, for this value to be disregarded when the provision for depletion expense is being determined. The accounting, under either setting, must be of such a nature that the net income of the business will be stated *fairly*.

3. The life of an asset subject to depletion should be established in terms of the total number of salable units expected to be profitably extracted and sold.

The difference between the original cost of an asset subject to depletion and its residual value is the amount of depletion expense to be charged against operations over the life of the asset. The depletion charge per unit of production is total depletion expense divided by the total number of depletion units (see factor 3 above).

The amount of the provision for depletion expense in a given accounting period is obtained by multiplying the number of units extracted during the period by the depletion charge per unit.

Example

John A. Briggs, Inc., purchased a coal property for $460,000.00, the purchase price representing

1,000,000 tons of coal at $0.45	$450,000.00
Value of surface land	10,000.00
	$460,000.00

An additional expenditure of $50,000.00 for preliminary development work was necessary before actual mining operations could be commenced on a commercial basis. In the first year of operations, 30,000 tons of coal were mined. What was the depletion charge for the year? The calculation would be

Original cost of the coal property	$460,000.00
Cost of preliminary developmental work	50,000.00
	$510,000.00
Less residual value (i.e., value of surface land)	10,000.00
Total depletion expense	$500,000.00

Depletion rate per ton:
$500,000.00 ÷ 1,000,000 = $0.50

Amount of provision for depletion expense for first year:
30,000 × $0.50 = $15,000.00

Recording Depletion Expense

The amount of the periodic provision for depletion expense would be recorded in the following manner:

Depletion Expense	15,000.00	
Allowance for Depletion		15,000.00
To record provision for depletion expense for 19__: 30,000 tons of coal at $0.50 = $15,000.00.		

Although the term "reserve for depletion" is still often used, it is being replaced by the much better term "allowance for depletion." (See recommendations for discontinuance of the use of the word "reserve," page 421.)

Depletion and the Financial Statements

The net book value of a property subject to depletion is obtained by taking the difference between the original book cost of the property and the balance of its related allowance for depletion account. Like the allowance for depreciation, the allowance for depletion is a valuation account. On the balance sheet, the allowance for depletion account should be deducted from the asset to which it relates, thus:

Mining Property	$510,000.00	
Less Allowance for Depletion	15.000.00	$495,000.00

Since the periodic provision for depletion expense parallels the periodic charge for purchases for a trading or manufacturing business, it is proper—

when statements of income are being prepared—for depletion expense to be handled in a manner similar to the handling of the purchases account. The sum of the provision for depletion expense and all extractive costs, accordingly, should be allocated to cost of sales and ending inventory in proportion to the number of units sold and on hand. This is illustrated in the following problem and statement of income.

Illustrative Problem

The Federal Coal Company purchased a coal property for $950,000.00. The estimated commercially recoverable tonnage was 1,000,000 tons. Moreover, after the property was no longer usable for mining operations, the land was estimated to be worth $20,000.00.

The company expended $70,000.00 for developmental costs, and erected mine buildings costing $25,000.00—estimated life 12½ years, no scrap value.

In the first year of operations 100,000 tons of coal were mined, 80,000 tons were sold for $520,000.00, and 20,000 tons were on hand at the end of the year.

Wages and other mining costs paid in cash amounted to $397,500.00 for the year. Selling and general expenses were $30,000.00 and $40,000.00, respectively.

What is the statement of income of the first year (before income taxes)?

Solution

Federal Coal Company

STATEMENT OF INCOME FOR THE YEAR ENDED DECEMBER 31, 19__

Sales, 80,000 tons			$520,000.00
Cost of Sales:			
Inventory, January 1, 19__		$ 0.00	
Cost of 100,000 tons mined in 19__:			
Depletion Expense, 100,000 × $1.00 = $100,000.00			
Depreciation Expense	2,500.00		
Wages and Sundry Mining Costs	397,500.00	500,000.00	
		$500,000.00	
Inventory, December 31, 19__, 20,000 tons:			
20,000/100,000 × $500,000.00		100,000.00	400,000.00
Gross Profit			$120,000.00
Selling Expenses		$ 30,000.00	
General Expenses		40,000.00	70,000.00
Net Profit			$ 50,000.00

In general outline this income statement is similar to one which might be prepared for a manufacturing company operating under the plan of periodic inventory. It will be observed, for example, that the provision for

depletion expense parallels the charge for raw-material purchases in the cost-of-goods-manufactured-and-sold section of a manufacturing company's profit and loss statement.

The ending inventory in the illustrative problem is valued at "cost" based on the cost experience of the company for the year. This "cost" is based on the production costs of the year, i.e., since the ending inventory of 20,000 tons is 20% of the physical production of 100,000 tons for the year, the value of this ending inventory is 20% of the year's production costs, $500,000.00, or $100,000.00.

DEPRECIATION EXPENSE The value used for depreciation expense, 10% × $25,000.00 = $2,500.00, should be noted. Instead of straight-line depreciation ($25,000.00 ÷ 12½ = $2,000.00), depreciation expense has been computed on the reasoning that since 10% of the mine has been depleted, accordingly, 10% rather than 8% of the service value of the mine buildings has been consumed.

On the other hand, had the mine buildings possessed an estimated life of five years, it would have been conservative accounting to establish the depreciation-expense value for the first year at 1/5 × $25,000.00 = $5,000.00. It is proper accounting for depreciation expense to be made proportionate to production in those cases where the physical lives of depreciable assets promise to be greater than that of the depleting asset in connection with which they are used.

Meaning of the Allowance for Depletion Account

The allowance for *depreciation* account represents that part of the cost of a depreciable asset which has been charged against income by provisions for depreciation expense. It is a valuation account used to determine the net book value of a depreciable asset. The allowance for depreciation account does signify, however, the amount of other assets—received by a business through the channel of sales—which compensate for the loss of capital as represented by provisions for depreciation expense.

Similarly, the allowance for *depletion* account represents that part of the cost of an asset subject to depletion which has been charged against income by provisions for depletion expense. It is a valuation account used to determine the net book value of an asset subject to depletion. The allowance for depletion account does signify, however, the amount of other assets—received by a business through the channel of sales—which compensate for the loss of capital as represented by provisions for depletion expense. Should the net loss (before depletion expense) of a business for an accounting period exceed the amount of the provision for depletion expense, there is not even any recovery of capital to compensate for that consumed by depletive operations.

Since it shows only the portion of original cost which has been charged

to operations by provisions for depletion expense to date, the allowance for depletion account is not related to the ability of a business to purchase new properties when the old properties have become exhausted by extractive operations. If new properties are to be purchased, it is the responsibility of the management of a business to manage the assets of that business so that cash will be on hand when needed for the purchase of new properties. *This is a problem of asset management.* The cash position of a business is not dependent upon its depletion policy, upon its depletion accounting, or upon the balance of the allowance for depletion account.

Dividends and the Allowance for Depletion Account

A business may sometimes find itself unable to use profitably the new assets which it has received in its stream of revenue transactions including, especially, the new assets received to compensate for the capital consumed through depletion. If, in this circumstance, the business also has more cash on hand than it needs for normal operating purposes, there is no objection to dividend disbursements being made "out of capital" in amounts whose total does not exceed the balance of the Allowance for Depletion account. If these disbursements are made, the distributions should be labeled as dividends from *capital* so that dividend recipients will know the real source of their dividends. This is but to say that, in determining the amount of dividends payable by a company which employs assets subject to depletion, the provision for depletion expense can be disregarded. In other words, the maximum dividend payable at a given date is an amount equal to the balance of the Retained Income account *plus* the difference between the balance of the Allowance for Depletion account and the cumulative total of dividends already paid out of capital. This latter total is the balance of the account described below, Capital Returned to Stockholders.

Example

What is the entry to record the declaration of the maximum dividend legally payable by the Federal Coal Company in its first year of operations (page 562)? The entry is

Retained Income (or Earned Surplus)	50,000.00	
Capital Returned to Stockholders	100,000.00	
Dividends Payable		150,000.00
To record maximum dividend payable for 19__. This dividend is a value equal to the sum of the balances in the Retained Income account, $50,000.00, and the Allowance for Depletion account, $100,000.00.		

By this entry it is clear that dividends which are legally paid out of capital rather than income are debited *not* to the Allowance for Depletion account but to an account titled Capital Returned to Stockholders. This

account, or one of similar title, would appear in the balance sheet as a deduction from Capital Stock, i.e., it would function as a *valuation account* for the investment represented by Capital Stock. The balance of this account should never exceed the balance of the Allowance for Depletion account. The balance of the Allowance for Depletion account is not affected by accounting entries giving effect to the return of capital to stockholders. This account continues to function steadily as a true valuation account for the depletive asset to which it relates.

Assets equal to the amount of provisions for depletion are legally distributable. Otherwise it would be obligatory for the capital of a business to be maintained *intact* until the date on which a wasting asset became exhausted and final liquidation of the business commenced. Unneeded funds might have to be held in the business for years. They could not be returned to those whose funds were invested in the business. Such withholding might be unnecessary and unjust. At the discretion of individual managements, therefore, the laws of the several states permit dividend distributions not only of profits but of assets equal to the amounts of charges for depletion as well. Creditors are not presumed to be injured by capital distributions of this kind because they are expected to be familiar with the nature of a business owning wasting assets, with the risks attaching to it, and to govern their individual actions accordingly.

Revision of Original Estimates of the Factors of Depletion

In any given case the provision for periodic depletion expense depends upon the number of units extracted and the amount of original cost assigned to each depletion unit. In turn, the fairness of the depletion unit is wholly dependent upon the accuracy of the factors which entered into its calculation. Of conspicuous importance in this respect are the quantitative estimates originally made for ore, gas, oil, and other reserves. If, at a later date, the original quantitative estimate of a reserve must be modified, then, as a matter of theory, the cost per depletion unit should be revised accordingly.

A revision of the cost per depletion unit would involve not only a change in the depletion expense per unit charged against current income but also an adjustment of the allowance for depletion account through a special debit or credit to the all-inclusive income account with profit and loss. The object of this adjusting entry is to leave the Allowance for Depletion account with the balance that would have been present in the account had the revised estimates been in use from the beginning of extractive operations. Adjustments of the allowance for depletion account appear on the statement of income as special debits or credits to income.

As a practical matter, however, the cost per depletion unit should be revised only when a significant change is required to be made in the original

estimate of quantitative reserves, a change sufficient to importantly affect the *fairness* of the financial statements, and when current information indicates that the revised estimate will be one of long serviceability.

PROBLEMS

Problem 26–1. The Valley Coal Company purchased for $600,000.00 a coal property estimated to contain 1,400,000 tons of coal. The surface land was estimated to have a value of $28,000.00 after the conclusion of mining operations.

The company expended $44,000.00 in developmental costs.

In the company's first year of operations, 42,000 tons of coal were mined and sold, total gross income from the sale of coal was $196,000.00, and expenses other than depletion expense were

Direct labor	$90,000.00
Depreciation expense on fixed assets used in mining operations	2,000.00
Selling expenses	28,000.00
Depreciation expense on fixed assets not used in mining operations	1,000.00
General expenses	19,000.00

Required

1. Prepare the statement of income for the first year of operations.
2. What is the maximum dividend legally payable from the operations of the first year?

Problem 26–2. In its second year of operations the Valley Coal Company (of Problem 26-1) mined 60,000 tons of coal and sold 55,000 tons for $292,000.00. Expenses other than depletion expense were

Direct labor	$152,160.00
Depreciation expense on fixed assets used in mining operations	3,360.00
Selling expenses	28,120.00
Depreciation expense on fixed assets not used in mining operations	1,000.00
General expenses	55,108.00

Required

1. Prepare the statement of income for the second year of operations.
2. Assuming no dividends to have been declared in the first year of operations, what is the maximum dividend legally payable at the end of the second year?

Problem 26–3. The Antlers Coal Company purchased a coal property for $470,000.00, coal reserves being estimated at 1,000,000 tons. No residual value was deemed to be present in the property after mining operations were concluded.

Before commencing active mining operations, the company incurred developmental costs of $30,000.00. Mine buildings were constructed at a cost of $32,000.00—estimated life 8 years, no scrap value.

In the first year of operations 100,000 tons of coal were mined, 90,000 tons were sold for $360,000.00, and 10,000 tons were on hand at the end of the year. Direct labor amounted to $140,000.00; depreciation expense on machinery and mine equipment, $2,000.00; and miscellaneous cash mining expenses, $44,000.00. Selling expenses were $38,000.00; depreciation expense on fixed assets (not employed in mining), $1,000.00; and general expenses, $55,000.00.

Required

Prepare a statement of income for the first year of operations.

Problem 26–4. The Penn Timber Company was the owner of 1,560,000,000 board feet of timber of which 1,200,000,000 were considered merchantable. The cost of the property was $2,340,000.00.

In its first year of operations, 60,000,000 feet were sold. Inventories, being negligible, were disregarded in the company's accounting.

Required

What is the depletion entry of the first year?

Problem 26–5. The Massey Oil Company purchased an oil property for a cash consideration of $1,000,000.00. The company then expended $188,222.40 for oil well equipment, the salvage value of which was reasonably estimated to be not more than $5,000.00. The property was estimated to have a reserve of 1,000,000 barrels of oil.

The first year's production was 286,733 barrels of oil.

Required

What are the depletion and depreciation entries of the first year?

Problem 26–6. On January 1, 19__, the Yonkers Coal Company, newly organized, had cash of $2,000,000.00 and common stock of $2,000,000.00, $100.00 par. A coal property was purchased for cash at a cost of $942,856.00. The property was estimated to have coal reserves of 2,000,000 tons, and an ultimate residual value of $40,000.00.

Disbursements were made for developmental costs of $69,144.00; for purchases of mining equipment, $48,000.00; and for office equipment, $6,000.00. The physical life of the purchased equipment was estimated at 10 years.

Statistics for the first year of operations were

Mined	60,000 tons	
Sold	55,000 tons for	$288,000.00
Inventory, December 31, 19__	5,000 tons	
Expenses paid in cash:		
Mine labor		105,656.00
Miscellaneous mining expenses		34,768.00
Selling expenses		48,000.00
General expenses		32,000.00

Required

1. Statement of income for the first year of operations.
2. On the basis of this statement of income, directors declare the maximum dividends legally payable out of the operations of the first year. What entry should be made?
3. Balance sheet, December 31, 19__.

Problem 26–7. After a year of operation, the Mountain Coal Company had the following balance sheet on December 31, 1957:

Assets

Cash		$ 383,000.00
Mine Property (estimated reserve, 1,400,000 tons)	$644,000.00	
Less Allowance for Depletion (42,000 tons)	18,480.00	625,520.00
Mine Equipment	$ 22,000.00	
Less Allowance for Depreciation	2,000.00	20,000.00
Office Equipment	$ 10,000.00	
Less Allowance for Depreciation	1,000.00	9,000.00
		$1,037,520.00

Net Worth

Common Stock, $100.00 par	$1,000,000.00
Retained Income	37,520.00
	$1,037,520.00

On January 1, 1958 the Fairmont Coal Corporation purchased the mine property of the Mountain Coal Company for a price of $600,000.00, the mine equipment for $20,000.00, and the office equipment for $9,000.00.

In the opinion of the Fairmont Coal Corporation, the estimated recoverable commercial tonnage of the mine was 1,000,000 tons. This estimate made allowance for the tonnage which had already been extracted by the Mountain Coal Company.

The Fairmont Coal Corporation invested an additional $40,000.00 in developmental work, and $20,000.00 in mine buildings. The buildings were expected to be useful for 10 years, which was also the estimated life of the mine. It was further estimated that, after the mine was exhausted, the residual value of the land would be $40,000.00, and that of the buildings, nothing.

In its first year of operation the Fairmont Coal Corporation mined 110,000 tons of coal and sold 100,000 tons for $664,000.00. Mining expenses (including labor) paid in cash amounted to $418,748.00. Disbursements for selling and general expenses were $56,000.00.

Required

Statement of income of the Fairmont Coal Corporation for the year ended December 31, 1958.

Problem 26–8. For a price of $740,000.00 the Beale Corporation purchased a coal property estimated to contain 3,000,000 tons of commercially

recoverable coal, and to have an ultimate surface land value of $50,000.00. Following the purchase, expenditures were made for developmental costs, $60,000.00.

The following data summarize the operations of the first 2 years:

	1st year	*2nd year*
Mined	100,000 tons	128,560 tons
Sold 98,000 tons for cash of	$241,208.00	
Sold 125,360 tons for cash of		$321,510.00
Mining expenses paid in cash	90,224.00	152,008.00
Depreciation expense on mine assets	1,132.00	1,600.00
Selling expenses	20,002.00	28,156.00
Depreciation expense on nonmine assets	400.00	644.00
General expenses	28,000.00	55,500.00

Required

1. Prepare a statement of income for each year.
2. Prepare a balance sheet at the end of the second year. Assume that no dividends were paid in either year, that capital stock was 8,000 shares of $100.00 par value, that retained income was the net income from the 2-year period, that liabilities were $121,560.00, that depreciable fixed assets of the mine cost $32,000.00, and that depreciable fixed assets of the general offices cost $5,000.00. The balance sheet should show as much detail as the information of the problem will permit; assets which cannot be definitely described may be labeled as "miscellaneous assets."
3. If, at the end of the second year, the company declared the maximum dividend legally distributable from the company's 2 years of operation, what entry should be made? Assume this entry to occur after the balance sheet of requirement 2.

Chapter 27

BONDS PAYABLE / INVESTMENTS IN BONDS

BONDS PAYABLE

Introduction

Corporations obtain assets in several ways:

By selling capital stock
By realizing profits
By borrowing
By donation

If a corporation decides to obtain funds by borrowing, it may borrow money in two ways:

1. By a short-term loan procured from a bank or other lender
2. By a long-term loan procured from individual, corporate, or institutional lenders

Long-term loans are executed through formal notes payable called bonds, generally due in ten or more years. A prominent example of corporate borrowing is the one-hundred-year, 3¾% promissory notes of the Union Carbide & Carbon Corporation, issued in 1951, and due November 1, 2051. These notes were issued pursuant to agreements entered into with The Prudential Insurance Company and the Metropolitan Life Insurance Company.

Definition of a Bond

A corporate bond is a written promise, under seal, to pay a specified sum of money, usually $1,000.00, at a fixed time in the future, usually more than ten years after the promise is made, it is usually one of a series of similar bonds all carrying interest at a fixed rate, and all covered by a so-called deed of trust, or mortgage, in which the corporation's property,

in whole or in part, may be mortgaged to the trustees for the benefit of all the bondholders.[1]

Characteristics of a Bond

A bond is a formal promise to pay and, as such, is a direct liability of the issuing corporation. Bond issues are created by formal authorization of the stockholders or the board of directors. The bonds must accord with the provisions of state law as well as with the charter and bylaws of the issuing corporation. Interest on bonds is generally payable semiannually, on specified dates, January 1 and July 1 of each year, for example.

Bonds may be *unsecured*, in which case they rest upon the general credit of the issuing corporation. Such bonds are commonly known as debenture bonds.

Bonds may be *secured*, in which case the security may be

1. real estate, for example, a first-mortgage bond;
2. personal property, such as machinery, equipment, rolling stock, or negotiable securities. Examples are equipment trust bonds and collateral trust bonds.

The total bond issue is divided into units of $100.00, $500.00, $1,000.00 or more, each unit representing one bond; the usual unit, however, is $1,000.00. Collectively, the bondholders are represented by a trustee, usually a bank or trust company, appointed by the corporation. The deed of trust, i.e., the bond indenture, between the corporation and the trustee details the rights of bondholders, the obligations of the corporation, and the property (if any) pledged to the trustee for the benefit of all bondholders. Because its provisions affect the financial statements of a business, the bond indenture is an important document to the accountant as well as to the contracting parties. Often, too, a bond indenture may contain provisions such as those relating to the restriction of dividends or to the maintenance of a required cash or current ratio.

The trustee authenticates (i.e., certifies) each bond as being a bond issued under the deed of trust.

1. Bonds may also be classified as *coupon bonds*. Interest on coupon bonds is represented by interest coupons attached to the bonds. These coupons are detached by the bondholder as they come due and deposited with a bank for collection. The ownership of a coupon bond is transferred by the act of delivery.

2. And bonds may be classified as *registered bonds*. The bondholder's name is registered with the corporation. Interest and principal payments, as they come due, are paid to the bondholder by check. The ownership of

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[1] Definition adapted from C. W. Gerstenberg, *Financial Organization and Management of Business* (2d ed.; New York: Prentice-Hall, Inc., 1932), p. 185.

a registered bond is transferred by assignment and by registry of the transfer upon the books of the corporation.

Coupon bonds are sometimes registered as to principal only.

There are many kinds of bonds and bond provisions. It is beyond the compass of this text to consider these matters in detail. This is the function of a standard text on corporation finance.

Accounting for Bonds Payable

Some of the more common accounting problems for bonds payable are illustrated in the following pages. For convenience the entries are presented in journal entry form.

THE BONDS ARE AUTHORIZED No accounting entries are necessary in order to record an authorized issue of bonds payable because no change has occurred in the assets and liabilities of the company. Unissued bonds are not assets but a channel for the procurement of assets. For informational purposes, however, it is well to place a memorandum of the authorized issue on the title line of the Bonds Payable account.

THE BONDS ARE ISSUED AT PAR On January 1, 1958, the XYZ Corporation sold $100,000.00 of its 10-year, 6% bonds at par (or face value). The principal on these bonds was due for payment January 1, 1968. Interest was payable semiannually, January 1 and July 1. The entry to record the sale of the bonds would be

Cash	100,000.00	
Bonds Payable		100,000.00
To record sale of $100,000.00, 10-year, 6% bonds, due January 1, 1968, at a price of 100.		

If the bonds had been subscribed for under an installment plan of payment after a down payment of 10%, the entry would have been

Cash	10,000.00	
Subscriptions Receivable—Bonds Payable	90,000.00	
Bonds Payable Subscribed		100,000.00
To record subscriptions for $100,000.00, 10-year, 6% bonds, due January 1, 1968, at a price of 100, with a 10% down payment, the balance being payable in installments.		

THE BONDS ARE SOLD AT PAR BETWEEN INTEREST PAYMENT DATES If the XYZ Corporation had sold its bonds (dated January 1, 1958) on February 1, 1958, at a price of 100, the entry would have been

Cash	100,500.00	
Bonds Payable		100,000.00
Bond Interest Payable		500.00

To record sale of $100,000.00, 10-year, 6% bonds, due January 1, 1968, at 100, plus 1 month's accrued interest.

When bonds are sold between interest-payment dates, they are sold at a price, plus accrued interest to date of sale.

When the XYZ Corporation pays the bond interest due July 1, 1958, the entry will be

Bond Interest Payable	500.00	
Bond Interest Expense	2,500.00	
Cash		3,000.00

To record semiannual payment of interest on 6% bonds of 1968:
3% × $100,000.00 = $3,000.00.

THE BONDS ARE SOLD AT A DISCOUNT On January 1, 1958, the XYZ Corporation sold $100,000.00 of its 10-year, 6% bonds at a price of 97. The entry would be

Cash	97,000.00	
Bond Discount	3,000.00	
Bonds Payable		100,000.00

To record sale of $100,000.00, 10-year, 6% bonds, due January 1, 1968, at a price of 97.

By way of introducing the accounting entries to be made subsequent to the issue date of these bonds, it will be clear that, when the bonds mature, January 1, 1968, the XYZ Corporation will have incurred the following total dollar expense on its bonds:

10 years' interest at $6,000.00 per year	$60,000.00
Difference between cash paid to redeem the bonds at their maturity date and their original sales price ($100,000.00 − $97,000.00)	3,000.00
Total cost of capital borrowed, i.e., bond interest expense	$63,000.00

Consequently, the average annual bond interest expense in dollars is 1/10 of $63,000.00, or $6,300.00. The detail of this value is

6% × $100,000.00	=	$6,000.00
1/10 × $3,000.00	=	300.00
		$6,300.00

This annual dollar cost of $6,300.00 represents an actual interest cost on the funds borrowed: 6,300.00 ÷ 97,000.00 = 6.494+%.

In order to debit each year with its bond interest expense of $6,300.00, the following entries should be made annually:

July 1	Bond Interest Expense		3,000.00	
	Cash			3,000.00

To record payment of semiannual interest on 6% bonds of 1968:
3% × $100,000.00 = $3,000.00.

Dec. 31	Bond Interest Expense	3,000.00	
	Bond Interest Payable		3,000.00
	To record 6 months' accrual of interest on 6% bonds of 1968:		
	3% × $100,000.00 = $3,000.00		
	Bond Interest Expense	300.00	
	Bond Discount		300.00
	To write off 1/10 of bond discount:		
	1/10 × $3,000.00 = $300.00.		

At the end of 10 years the Bond Discount account will have been written off, leaving only the $100,000.00 liability in the Bonds Payable account. On January 1, 1968, when the bonds are redeemed, the entry of payment will be:

Bonds Payable	100,000.00	
Bond Interest Payable	3,000.00	
Cash		103,000.00
To record redemption of $100,000.00 of 6% bonds of 1968, due today, and 6 months' accrued interest.		

THE BONDS ARE SOLD AT A PREMIUM On January 1, 1958, the XYZ Corporation sold $100,000.00 of its 10-year, 6% bonds at a price of 102. The entry would be

Cash	102,000.00	
Bonds Payable		100,000.00
Bond Premium		2,000.00
To record sale of $100,000.00, 10-year, 6% bonds, due January 1, 1968, at a price of 102.		

When these bonds mature, January 1, 1968, the XYZ Corporation will have incurred the following total dollar expense on its bonds:

10 years' interest at $6,000.00 per year	$60,000.00
Difference between the original sales price of the bonds and the cash paid to redeem them at their maturity date ($102,000.00 − $100,000.00)	2,000.00
Total cost of capital borrowed, i.e., bond interest expense	$58,000.00

Consequently, the average annual bond interest expense in dollars is 1/10 of $58,000.00, or $5,800.00. The detail of this value is:

6% × $100,000.00 =	$6,000.00
1/10 × $2,000.00 =	200.00
	$5,800.00

This annual dollar cost of $5,800.00 represents an actual interest cost on the funds borrowed: 5,800.00 ÷ 102,000.00 = 5.686+%.

In order to debit each year with its bond interest expense of $5,800.00, the following entries should be made annually:

July 1	Bond Interest Expense	3,000.00	
	Cash		3,000.00
	To record payment of semiannual interest on 6% bonds of 1968:		
	3% × $100,000.00 = $3,000.00.		
Dec. 31	Bond Interest Expense	3,000.00	
	Bond Interest Payable		3,000.00
	To record 6 months' accrual of interest on 6% bonds of 1968:		
	3% × $100,000.00 = $3,000.00.		
	Bond Premium	200.00	
	Bond Interest Expense		200.00
	To write off 1/10 of bond premium:		
	1/10 × $2,000.00 = $200.00.		

At the end of 10 years the Bond Premium account will have been written off, leaving only the $100,000.00 liability in the Bonds Payable account. On January 1, 1968, when the bonds are redeemed, the entry of payment will be:

Bonds Payable	100,000.00	
Bond Interest Payable	3,000.00	
Cash		103,000.00
To record redemption of $100,000.00 of 6% bonds of 1968, due today, and 6 months' accrued interest.		

Amortization of Bond Discount and Bond Premium

The process of systematically writing off the balances of accounts with Bond Discount and Bond Premium over the life of the bond issue, as illustrated on pages 573 and 574, is called "amortization" of bond discount, or bond premium, as the case may be. The method of amortization used on the illustrative pages is called the straight-line method of amortization. This method is widely used.

Greater accuracy, however, can be achieved in amortizing the discount and premium on bonds payable—and in determining the interest cost of funds borrowed—if an alternative method is used, the compound interest method of amortization. This method is discussed and illustrated in the author's *Intermediate Accounting*.

Bond Discount and Bond Premium on the Balance Sheet

On the balance sheet, it is common practice for the discount on bonds payable to be shown as a deferred expense, and bond premium as a deferred credit. However, if the accounting valuation for bonds payable is to be shown precisely, the discount and premium accounts should be handled as valuation accounts, thus:

Bonds Payable, 6%, due January 1, 1968	$100,000.00	
Less Unamortized Bond Discount	3,000.00	$ 97,000.00

and

Bonds Payable, 6%, due January 1, 1968 . .	$100,000.00	
Plus Unamortized Bond Premium . . .	2,000.00	$102,000.00

These illustrative values are those found in the balance sheets of the XYZ Corporation, December 31, 1958.

This method of evaluating bonds payable on the balance sheet reflects accounting theory to the effect that the current accounting value for a liability, payable at a future date, is its present discounted value. It is appropriate to observe, in this connection, that bond discount can hardly be an asset. Instead of being prepaid interest expense, it is actually an expense which is still to be paid.

From the standpoint of current practice in accounting, however, the liability of a company for its bonds payable is the par value of the bonds which are outstanding. This par value is looked upon as the company's liability, regardless of the price which the company may have received when its bonds were sold. If the balance sheet is prepared with this understanding in mind—and this is the general practice of commercial accounting—it follows that unamortized bond discount is carried in the balance sheet as a "deferred charge" and bond premium as a "deferred credit." Bonds Payable appear in the balance sheet as a liability valued at the par value of the bonds.

Bond Expenses

The sale of an issue of bonds payable by a corporation involves certain costs such as, for example, legal fees, and printing and engraving expenses. Although these expenditures—similar to those incurred in the sale of capital stock—represent costs in the procurement of capital, bond expenses are not true *interest* costs. In theory, bond expenses should be accounted for as deferred charges to be written off to profit and loss on a straight-line basis over the periods in which the bonds are outstanding. In practice, however, bond expenses are generally written off in the period of their incurrence as a charge against income. These charges against income are generally appraised as *not* significantly affecting the fairness of reported periodic values for net income.

Sinking Funds

A bond contract often contains a provision to the effect that the borrowing corporation will periodically deposit with the trustee of the bond issue a sum of money which, accumulating at compound interest, will become an amount sufficient to retire either all or a part of the entire bond issue at its maturity date or, alternatively, will retire a part of the bond issue before it is legally due for payment. For example, assume that the

sinking fund of a corporation is to be large enough to retire an issue of bonds payable at maturity and that the sinking fund is to increase at the rate of $10,000.00 annually.

At the End of the	*The Corporation Will Deposit*	*Interest Earned by Trustee on Moneys Deposited with Him (at an Assumed Rate of 6%)*	*Amount of Fund*
1st year	$10,000.00		$ 10,000.00
2d year	9,400.00	$ 600.00	20,000.00
3d year	8,800.00	1,200.00	30,000.00
4th year	8,200.00	1,800.00	40,000.00
5th year	7,600.00	2,400.00	50,000.00
6th year	7,000.00	3,000.00	60,000.00
7th year	6,400.00	3,600.00	70,000.00
8th year	5,800.00	4,200.00	80,000.00
9th year	5,200.00	4,800.00	90,000.00
10th year	4,600.00	5,400.00	100,000.00

Accounting entries are relatively simple:

1. When cash is deposited with the independent trustee:

Sinking Fund with Trustee	xxx xx	
Cash		xxx xx

2. When the independent trustee reports income earned:

Sinking Fund with Trustee	xxx xx	
Sinking Fund Income		xxx xx

3. When the independent trustee reports expenses incurred:

Sinking Fund Expenses	xxx xx	
Sinking Fund with Trustee		xxx xx

4. When the bonds are paid at maturity by the independent trustee:

Bonds Payable	100,000.00	
Sinking Fund with Trustee		100,000.00

Alternatively, the bond indenture might call for the payment of equal annual installments of money to the independent trustee. These payments, accumulating at compound interest, would become an amount sufficient to retire the bond issue at maturity. Under these conditions the sinking fund would operate as follows:

At the End of the	*The Corporation Will Deposit*	*Interest Earned by Trustee on Moneys Deposited with Him (at an Assumed Rate of 6%)*	*Amount of Fund*
1st year	$7,586.80		$ 7,586.80
2d year	7,586.80	$ 455.21	15,628.81
3d year	7,586.80	937.73	24,153.34
4th year	7,586.80	1,449.20	33,189.34
5th year	7,586.80	1,991.36	42,767.50
6th year	7,586.80	2,566.05	52,920.35
7th year	7,586.80	3,175.22	63,682.37
8th year	7,586.80	3,820.94	75,090.11
9th year	7,586.80	4,505.41	87,182.32
10th year	7,586.80	5,230.94	100,000.06

In actual practice, sinking fund provisions vary widely. One example of a sinking fund provision is the following:

> GREAT NORTHERN RAILWAY COMPANY, 3⅛% GENERAL MORTGAGE BONDS, SERIES N AND O, ISSUED JULY 1, 1945, AND DUE JANUARY 1, 1990 AND JANUARY 1, 2000
>
> Sinking fund: the Company will pay to the Trustee annually on July 1 of each year, commencing with the year 1947, for so long as any of the Series N or O bonds are outstanding in the hands of the public, the sum of $375,000, or the Company's net income (as defined by the accounting classifications of the Interstate Commerce Commission at the time in force) for the year ending on the preceding December 31, whichever is the lesser.

On the balance sheet a sinking fund should be shown as a noncurrent investment account. However, to the extent that sinking fund securities are bonds of the depositing corporation to be retired by the sinking fund, the securities in the sinking fund are deductions from bonds payable. It is not acceptable accounting to classify, as an asset, securities reacquired by a corporation from its own bonds of issue.

While a bond indenture may require a corporation to accumulate a sinking fund, it is common practice today for the indenture to require that funds deposited with the trustee—in excess of bond interest requirements—shall be used to acquire bonds of issue by call or by their purchase in the open market. The annual deposit made for bond acquisition purposes should be large enough to amortize the bonds by their maturity date. When bonds are redeemed in lieu of accumulating a fund, the redeemed bonds are treasury bonds (a contra-liability account); and the sinking fund, if any, will likely be of small amount, i.e., cash not yet disbursed by the trustee for bonds or bond interest expense.

Sinking Fund Reserves

An indenture for bonds payable, besides requiring a corporation to establish a sinking fund, may stipulate that a sinking fund reserve shall be established as well. The purpose of such a provision is to guard against an unnecessary impairment of the working capital of a corporation. For example, if a corporation—which is required to make a yearly cash payment to the trustee of its sinking fund—follows the policy of paying out all, or nearly all, its profits in cash dividends, the ultimate consequence may well be an impairment of the company's cash and working capital positions to the detriment of

1. the company's operations, and
2. the bondholders from two standpoints:

a) inability of the company to continue the required sinking fund deposits, and
b) lower market values for the company's bonds.

The impairment of working capital is guarded against by a stipulation in the bond indenture wherein the corporation is required to retain in the business an amount of earned income equal to the amount of the sinking fund. In accordance with this requirement, the following entry would be made annually:

Retained Income (or Earned Surplus)	10,000.00	
Reserve for Sinking Fund		10,000.00
To record yearly appropriation of surplus as per agreement with trustee of bonds.		

At the end of each year, therefore, the balance in the Reserve for Sinking Fund account is equal to the balance in the Sinking Fund account.

At maturity, after the bonds have been paid, the sinking fund reserve is no longer needed or required. It is proper, then, to transfer the appropriated profits back to free surplus, thus:

Reserve for Sinking Fund	100,000.00	
Retained Income (or Earned Surplus) . .		100,000.00
To record transfer of sinking fund reserve to retained income, the bonds having been paid.		

In this example the Reserve for Sinking Fund has exactly matched the amount of the sinking fund. Alternatively, the bond indenture might be less severe. For example, it might provide that the Reserve for Sinking Fund is to be a specified percentage (less than 100%) of the amount in the sinking fund.

Although a bond contract may call for a sinking fund and a sinking fund reserve, it may, on the other hand, call only for a reserve without accompanying fund. The reserve would receive some such title as Reserve for Bonds Payable, and credits would be made to the account as specified in the bond contract. These annual credits to the reserve would be offset by debits to Earned Surplus or Retained Income (although some bond contracts specify current Profit and Loss).

Provisions like these obviously increase the security of bonds and enhance their attractiveness to investors.

Treasury Bonds

Treasury bonds are unissued bonds payable and issued bonds payable reacquired by the issuing corporation. Since it is legally proper for a corporation to sell its own bonds payable at any time at a price below par—with no liability for the discount attaching to the purchasers of the bonds—there is no important reason why a corporation should distinguish between unissued bonds and reacquired bonds in the corporate treasury.

When a corporation comes into possession of its own bonds of issue and the bonds are canceled, the debit is to Bonds Payable for the par value of the bonds. If the reacquired treasury bonds are not canceled, the debit is to the Treasury Bonds account. A separate account with Treasury Bonds is generally maintained for informational purposes to show, for example, the amount of debt retired or the amount of bonds available for issue. Debits and credits to the Treasury Bonds account are always for the par value of the bonds of the transactions being recorded.

When bonds payable are retired in advance of their maturity dates, and canceled, their book values should be cleared from the accounts. The accounting entry to record a purchase of treasury bonds is as follows:

DEBIT: the Treasury Bonds account for the par value of the bonds acquired.

DEBIT: the Bond Interest Payable account for the accrued interest, if any, on the bonds purchased.

DEBIT: the Bond Premium account for the unamortized bond premium applicable to the bonds acquired. For example, if 10% of a company's outstanding bonds payable were purchased as treasury bonds, then 10% of the balance of the Bond Premium account should be written off.

CREDIT: the Bond Discount account for the unamortized bond discount applicable to the bonds acquired. For example, if 10% of a company's outstanding bonds payable were purchased as treasury bonds, then 10% of the balance of the Bond Discount account should be written off.

CREDIT: Cash for the amount of cash disbursed.

DEBIT: Loss on Purchase of Treasury Bonds to record the loss incurred on the acquisition of the bonds.

CREDIT: Gain on Purchase of Treasury Bonds to record the gain realized on the acquisition of the bonds.

The value for loss or gain on the acquisition of treasury bonds is the difference between the credit to Cash and the consolidated net debit to the first four accounts named in this summary.

Bonds Payable on the Balance Sheet

When a corporation acquires some of its own outstanding bonds payable and these reacquired bonds are canceled, the liability of the corporation to bond creditors is reduced by an amount equal to the par value of the bonds canceled. On the balance sheet, therefore, it is sufficient that the

liability for bonds payable be shown at the value which represents the corporation's net liability to the outside world. It is not necessary to mention the amount of bonds canceled.

Reacquired bonds which are not canceled should appear on the balance sheet as separate items. Since these bonds result, temporarily at least, in a reduction of the corporation's bonded indebtedness, they should be deducted from the Bonds Payable account, thus:

Long-Term Liabilities:		
Bonds Payable, 5%, due January 1, 1970:		
Authorized	$1,000,000.00	
Less Bonds in Treasury	100,000.00	$900,000.00

Unissued bonds payable may be handled in a similar manner, i.e., they may be shown as treasury bonds.

It is important for treasury bonds to be shown separately in the balance sheet. It would be unsatisfactory to show all bonds payable in the balance sheet as "Bonds Payable . . . . $900,000.00" because this would conceal the fact that the corporation has the ability and authority to increase its outstanding bonded indebtedness by an additional $100,000.00. This information is of importance to bondholders, stockholders, and bankers.

INVESTMENTS IN BONDS

Short-Term Investments in Bonds

Bonds (other than its own bonds of issue) which have been purchased by a business for purposes of short-term investment are easily accounted for. They are recorded on the books at full purchase cost (including commissions, taxes, and the like). When the bonds are sold, their cost should be cleared from the Bond account with the gain or loss on sale credited to Gain on Sale of Bonds, or Loss on Sale of Bonds, as the case may be.

On the balance sheet, short-term investments in bonds should be shown at their original cost. It is desirable to supplement this value with a memorandum showing the current market value of the bonds, thus:

Marketable Securities:	
U. S. Government Bonds, at cost (market, $101,000.00) .	$100,000.00

Long-Term Investments in Bonds

The accounting for bonds purchased for purposes of long-term investment is more complex. The balance of this chapter will be devoted to this particular phase of bond ownership.

THE BONDS ARE PURCHASED AT PAR Assume that, on January 1, 1958, an investor purchased $10,000.00 par value Arthur & Company 5½% bonds of 1968 at a price of 100.

Bonds	10,000.00	
Cash		10,000.00
To record purchase of 10M of Arthur & Company 5½% bonds of 1968 at 100.		

If the bonds had been purchased between interest-payment dates, accrued interest would have been purchased as well. For instance, if the foregoing bonds had been purchased on February 1, 1958, at 100, the entry would have been

Bonds	10,000.00	
Bond Interest Receivable	45.83	
Cash		10,045.83
To record purchase of 10M of Arthur & Company 5½% bonds of 1968 at 100 and accrued interest.		

THE BONDS ARE PURCHASED AT LESS THAN PAR Assume that the foregoing bonds had been purchased at a price of 95. The bonds would be recorded at their cost:

Bonds	9,500.00	
Cash		9,500.00
To record purchase of 10M of Arthur & Company 5½% bonds of 1968 at 95.		

By way of introducing the accounting entries to be made subsequent to the purchase date of the bonds, it should be understood that, when the bonds mature January 1, 1968, the investor will have received the following total dollar income on his investment:

10 years' interest at $550.00 per year	$5,500.00
Difference between cash received for the bonds at their maturity date and their original purchase cost ($10,000.00 − $9,500.00)	500.00
Total return on capital invested, i.e., bond interest income	$6,000.00

Consequently, the average annual bond interest income in dollars is 1/10 of $6,000.00, or $600.00. The detail of this value is

5½ × $10,000.00 =	$550.00
1/10 × $500.00 =	50.00
	$600.00

This annual dollar return of $600.00 represents a yield on the original investment: 600.00 ÷ 9,500.00 = 6.315+%.

In order to credit each year with its bond interest income of $600.00, the following entries should be made annually:

July	1	Cash	275.00	
		Bond Interest Income		275.00
		To record collection of semiannual interest on 10M of Arthur & Company 5½% bonds of 1968.		

Dec. 31	Bond Interest Receivable	275.00	
	Bond Interest Income		275.00
	To record 6 months' accrual of interest on 10M of Arthur & Company 5½% bonds of 1968, and collectible January 1, 19__.		
	Bonds	50.00	
	Bond Interest Income		50.00
	To amortize 1/10 of discount on bonds: 1/10 × $500.00 = $50.00.		

It follows, therefore, that the value of the bonds on the books will increase $50.00 each year. At the end of each year, the book value of the bonds will be

December 31			
1958	$9,550.00	1963	$ 9,800.00
1959	9,600.00	1964	9,850.00
1960	9,650.00	1965	9,900.00
1961	9,700.00	1966	9,950.00
1962	9,750.00	1967	10,000.00

On January 1, 1968, when the bonds are redeemed, the entry of collection will be simply

Cash	10,275.00	
Bonds		10,000.00
Bond Interest Receivable		275.00
To record redemption of 10M of Arthur & Company 5½% bonds due today, and 6 month's accrued interest.		

THE BONDS ARE PURCHASED AT MORE THAN PAR If the Arthur & Company bonds had been purchased at 105, the entry of purchase on January 1, 1958, would have been:

Bonds	10,500.00	
Cash		10,500.00
To record purchase of 10M of Arthur & Company 5½% bonds of 1968 at 105.		

When the bonds mature January 1, 1968, the investor will have received the following total dollar income on his investment:

10 years' interest at $550.00 per year	$5,500.00
Difference between the original cost of the bonds and the cash received for them at their maturity date ($10,500.00 — $10,000.00)	500.00
Total return on capital invested, i.e., bond interest income	$5,000.00

Consequently, the average annual bond interest income in dollars is 1/10 of $5,000.00, or $500.00. The detail of this value is

$$5\frac{1}{2} \times \$10{,}000.00 = \$550.00$$
$$1/10 \times \$500.00 = \quad 50.00$$
$$\$500.00$$

This annual dollar return of $500.00 represents a yield on the original investment: 500.00 ÷ 10,500.00 ÷ 4.761+%.

In order to credit each year with its bond interest income of $500.00, the following entries should be made annually:

July 1	Cash	275.00	
	Bond Interest Income		275.00
	To record collection of semiannual interest on 10M of Arthur & Company 5½% bonds of 1968.		
Dec. 31	Bond Interest Receivable	275.00	
	Bond Interest Income		275.00
	To record 6 months' accrual of interest on 10M of Arthur & Company 5½% bonds of 1968, and collectible January 1, 19__.		
	Bond Interest Income	50.00	
	Bonds		50.00
	To amortize 1/10 of premium on bonds: 1/10 × $500.00 = $50.00.		

It follows, therefore, that the value of the bonds on the books will decrease $50.00 each year. At the end of each year, the book value of the bonds will be

December 31			
1958	$10,450.00	1963	$10,200.00
1959	10,400.00	1964	10,150.00
1960	10,350.00	1965	10,100.00
1961	10,300.00	1966	10,050.00
1962	10,250.00	1967	10,000.00

On January 1, 1968, when the bonds are redeemed, the entry of collection will be

Cash	10,275.00	
Bonds		10,000.00
Bond Interest Receivable		275.00
To record redemption of 10M of Arthur & Company 5½% bonds due today, and 6 months' accrued interest.		

Amortization of Discount and Premium on Long-Term Investments in Bonds

In this chapter the discount and premium on long-term investments in bonds have been written off in equal annual amounts. This accounting method is called straight-line amortization of discount and premium and is a method widely used. However, greater accuracy can be achieved in amortizing the discount and premium on bonds—and in determining the interest yield on an investment—if an alternative method is used: the compound interest method of amortizing bond discount and premium. This method is discussed in the author's *Intermediate Accounting*.

PROBLEMS

Problem 27–1. On January 1, 1958, the L. C. Barrett Corporation sold $1,000,000.00 of its 10-year, 6% debenture bonds at a price of 100. Interest was payable January 1 and July 1.

Required

1. Entry to record the sale of the bonds.
2. If the bonds, dated January 1, 1958, had been actually sold on January 10, 1958, what should be the entry of sale?
3. If the bonds had been sold on January 1, 1958, at a price of 96, what should be the entry of sale?

Problem 27–2. On January 6, 1958, the Denny-Sanford Corporation sold a 10-year, 6% bond issue of $1,000,000.00 at a price of 96. The bonds were dated January 1, 1958; interest was payable January 1 and July 1. The bonds were callable at 100 on and after January 1, 1963.

Required

1. Entry to record the sale of the bonds.
2. Entry that should be made if the bonds were paid at the end of 5 years. *Note:* Record amortization on the basis of whole years.

Problem 27–3. On June 1, 1958, the Krory Stores Corporation redeemed its 15-year, 5% debenture bonds due May 1, 1966, in the par value of $10,000,000.00. The price paid was par plus a premium of 4%. Interest on the bonds was payable May 1 and November 1.

Required

Entry to record the payment of these bonds.

Problem 27–4. On January 1, 1956, the Baker-Hall Company sold an issue of $1,000,000.00 6%, 10-year bonds, dated January 1, 1956, at a price of 97½. Interest was payable January 1 and July 1.

On January 1, 1958, the company purchased $100,000.00 of its own bonds in the open market at a price of 99. These bonds were cancelled.

Required

1. All entries to be placed on the books up to and including January 1, 1958.
2. Entry to record the payment of the remaining bonds at their maturity date.

Problem 27–5. On January 1, 1956, the Boles Manufacturing Company issued $1,000,000.00 par value, 6% bonds, dated January 1, 1956, and due January 1, 1966. Interest on the bonds was payable semiannually, January 1 and July 1. Net proceeds on the sale of the bonds amounted to $951,428.58.

Interest was paid regularly on the bonds, but no amortization of bond discount was placed on the books until March 31, 1959. On this date the company purchased $40,000.00 par value of its own bonds in the open market at a price of 96.

Required

1. Entry or entries to bring the amortization of bond discount up to date.
2. Entry to record the purchase of the treasury bonds, March 31, 1959.

Problem 27–6. On January 1, 19__, the Staley Electric Company sold $5,000,000.00 of its 6%, 20-year debenture bonds, interest payable January 1 and July 1, realizing net cash of $4,638,957.00.

Required

1. Entry to record the sale of the bonds.
2. Entries to record the first and fortieth interest payments.
3. Entries to record the first and twentieth annual amortizations of bond discount.
4. Entry to record the payment of the bonds at their maturity date.

Problem 27–7. The condensed balance sheet of the Farrine Hardware Company on December 31, 1956, was

Cash, Accounts Receivable, Inventory, etc.	$ 90,000.00	Common Stock, $100.00 par	$150,000.00
Building (new)	100,000.00	Earned Surplus	50,000.00
Land	10,000.00		
	$200,000.00		$200,000.00

In 1957 the company issued $40,000.00 of long-term notes payable. The notes, dated January 1, 1957, were due in 10 years and carried interest at the annual rate of 6%, interest payable semiannually, January 1 and July 1. The notes were actually sold as follows:

$25,000.00 on January 1, 1957, at a price of 100
$15,000.00 on April 1, 1957, for cash proceeds of $13,578.00, not including accrued interest

On January 1, 1959, the company had more cash on hand than was needed for its working capital requirements. The notes payable, accordingly, were all paid at an average price of 101.

Required

Condensed balance sheet of the company, January 1, 1959, after giving effect to the payment of the notes payable, $40,000.00. Assume the balance sheet of December 31, 1956 to be changed only by

the above note transactions,
annual depreciation expense of 5%, and
consolidated net income for 1957 and 1958, $25,000.00.

No dividends were paid in either year.

Problem 27–8. On March 1, 1957, the Madison Building Corporation sold $1,000,000.00 of its 6% mortgage bonds at a price of 90. The bonds were dated January 1, 1957, and were due in 10 years. Interest on the bonds was payable semiannually, January 1 and July 1. An annual cash deposit of $100,000.00 in an independent sinking fund and an annual addition to the Sinking Fund Reserve account of $100,000.00 were among the requirements of the bond indenture.

Required

All entries which should be placed on the books of the Madison Building Corporation in connection with the above bond issue up to, and including, December 31, 1959. For the purpose of this problem, the interest earned on the sinking fund investment may be disregarded.

Problem 27–9. The condensed balance sheet of the Hale & Starret Company on December 31, 1956, was

Sundry Assets . .	$20,092,809.00	Accounts Payable . . .	$ 1,636,279.00
Bond Discount . .	465,237.00	6% Bonds Payable, due December 31, 1966 . . .	6,000,000.00
		Common Stock, $100.00 par	12,000,000.00
		Retained Income	921,767.00
	$20,558,046.00		$20,558,046.00

On January 1, 1958, the company purchased $100,000.00 of its bonds at a cost of $920.00 each.

Required

Entry to record the purchase of the treasury bonds.

Problem 27–10. On March 1, 1958, Raymond C. King purchased $10,000.00 par value, 6% bonds of the Detroit-Leland Corporation at a price of 94. Interest on these bonds was payable January 1 and July 1.

Mr. King sold his bonds on June 1, 1958, at a price of 99.

Required

Entries of March 1, and June 1, 1958.

Problem 27–11. On January 31, 1958, Dale E. Harris purchased $10,000.00 par value Denny-Sanford Corporation bonds on the open market at a price of 97. (See Problem 27-2 for a description of these bonds.) Mr. Harris made his purchase with the intention of holding the bonds until the date of their maturity.

Required

1. Entry to record the purchase of the bonds.
2. Entry or entries to be made December 31, 1958, to record bond interest collectible and amortization of bond discount for the year 1958. Record amortization on the basis of whole years only.

3. Entry that should be made if the bonds were redeemed at the end of 5 years.

Problem 27–12. On March 1, 1956, the First State Bank purchased (as a long-term investment) $10,000.00, par value Baker-Hall Company bonds at a price of 97½. (See Problem 27-4 for a description of these bonds.)

On June 30, 1958, the bank decided to make a change in its investment portfolio. Accordingly, it sold the Baker-Hall bonds in the market at a price of 100.

Required

All entries up to and including June 30, 1958.

Problem 27–13. On August 1, 1958, Bond Investments, Incorporated, purchased $100,000.00, par value Scott Chemical Company convertible 5% bonds at 74. These bonds were due April 1, 1966. Interest was payable semiannually, April 1 and October 1.

Required

1. Assuming that these bonds were purchased for the purpose of short-term investment, what entries should be made up to and including December 31, 1958?

2. Assuming that these bonds were purchased for the purpose of long-term investment, what entries should be made up to and including December 31, 1958?

Chapter 28 THE STATEMENT OF INCOME

Introduction

The statement of income is one of the two principal statements of accounting. Its function is that of fairly reporting the net income of a business for an accounting period. In doing this, it systematically reports upon the events of an accounting period in so far as gains, costs, and losses are concerned. For many years the statement of income was looked upon as a statement whose importance was much less than that of the balance sheet. Indeed, the statement of income was long looked upon as being simply a statement of supplementary importance.

In recent years, however, the statement of income has increasingly replaced the balance sheet as "the dominant statement of accounting." Today, more than ever before, the interest of businessmen and investors centers increasingly upon the earnings of an enterprise and decreasingly upon the fixed, historical values of the balance sheet. Investors, for example, are more interested than ever before in the income aspects of their investments. They are interested not only from the standpoint of the direct yields which they receive in the form of interest and dividends but also because the market worths of their investments are importantly affected by the earnings which underlie the securities they own. This interest is one which, succinctly stated, regards performance rather than periodic financial position as the primary test of the success of business enterprise. Balance sheets are statements of financial position which couple one performance period to another.

The primary function of the statement of income, as already stated, is to report fairly the amount of net income which has been earned by a business over an accounting period; and to report, also, upon the elements which have entered into the earning of net income. In the preparation of an income statement which fulfills this primary function, a thorough understanding of a correct definition of net income is a cardinal prerequisite.

The statement of income explains the operating progress of a business

from one balance sheet date to the date of the next succeeding balance sheet. It shows the income-earning ability of a business. It is a reminder, constantly, of the importance of controlling the elements which enter into the earning of income. Since the values of a statement of income are historical, it is important that the financial information of this statement be used by management to fix responsibilities for past performances and to control the values which are currently in the process of becoming the components of future statements of income. This is but to say that while nothing can be done about values which have been expended, *something can be done* about the values which are currently in the process of being, or are proposed to be, expended. Men must be controlled, funds must be controlled, and the tests of business management and business success are the *results* and how well the results have been controlled. It is through the statement of income that appraisals of progress may be made and conclusions drawn. The statement of income is a report on business performance which is indispensable to management and to those to whom management is responsible. It is one of the fundamentals of successful business management that the financial *control* system of a business be made effective by having established financial objectives against which to measure performance.

INCOME TAXES The net income of a business is today importantly affected by income taxes. Corporate income taxes under the Internal Revenue Code of 1954 were generally at the rate of 52% for all taxable income in excess of $25,000.00 (the first $25,000,00 being taxed at 30%). Hence, as the income year of a corporation unfolds, it is important for a management to keep in mind the *tax consequences* of its decisions at the time when these decisions are being made. In planning for the realization of a net income of a more or less determinable amount, the tax factor is one of the variables that must be considered when managerial decisions are being made.

The incorporation of the "tax factor" into the decisions of management does *not* mean that tax considerations should ever be allowed to undermine the efficiency of a business or that tax payments should be minimized to the point where their cost is more than operational savings. It is simply a material factor entering into the decisions of enlightened management to retain as much of net-income-before-taxes as possible. Examples of transactions which should include tax considerations before decisions are made include the sale of securities within or after a six months' holding period, the sale of securities in a current or later year, the deferral or acceleration of income and expense transactions (like maintenance expenses), wage and pension contracts, the possibility of a tax on the unreasonable accumulation of surplus when dividend payments are under consideration, and so on.

INCREASED PROFESSIONAL ACCOUNTING RESPONSIBILITIES With emphasis having shifted from the balance sheet to the statement of income, it should be evident that the responsibility of the public accountant has been sharply increased. More than ever before it is his obligation to set forth the amount of net income on the statement of income as accurately as his expert professional ability will allow. The statement of income must be adequately informative, it must be inclusive, it must be truthful, and it must conform to the use of accepted principles of accounting, consistently applied.

What Is "Net Income" in the Statement of Income?

As stated on page 589 the primary function of the statement of income is to report the amount of net income which has been earned by a business over a specified period of time. But what, precisely, is the meaning of the term "net income"? There are some differences of accounting opinion on this point.

One concept of net income is that "net income should be all-inclusive." For a given accounting period, the net income of a business should be the excess of net worth at the end of the period over the net worth at the beginning of the period, excluding, however, any increases in realized net worth resulting from investments or donations of capital and excluding, also, all distributions of earned or invested capital.

A second concept of net income is that it should reflect or emphasize the income earned by a business from *operations*. A statement of income prepared according to this concept is one based on what is called *current operating performance*. It excludes material items of gain or loss which are not related to operations or which, were they included, would significantly impair the meaning of net income.

The present trend in both the theory and the practice of accounting is definitely in the direction of making statements of income *fully inclusive*. Under this philosophy of accounting, *all* the gains, costs, and losses of an accounting period are placed in the statement of income for the period. The income statement becomes, in consequence, a complete income history of the period. Thus, *net income* is understandably set forth on the statement of income as that income which remains after consolidating *all* gains, costs, and losses. This concept of net income is logical and tenable. It is also the businessman's understanding of net income, i.e., net income *after everything*.

It may be observed, parenthetically, that the inclusion of extraordinary or extraneous items in the statement of income under the headings of "special income credits" and "special income debits" is also often well justified on the grounds that these extraordinary or extraneous items recur year after year. In other words, it is often true that extraordinary costs, when considered as a *group*, are just as regular a cost of doing business as

are the more common groups for operating expenses. Similar comments also often apply to extraordinary or extraneous items of income when considered as a *group*.

DEFINITION OF NET INCOME Under the "all-inclusive" concept, net income may be defined as being the excess of the total of all incomes over the total of all expenses, costs, and losses of a business for a specific period of time. It might also be defined as follows:

The amount of net income earned by a business over a given period of time is the excess of net worth at the end of the period over the net worth at the beginning of the period excluding, however, any increases in realized net worth which have occurred during the period because of investments or donations of capital; and making allowance, further, for any distributions of earned income or invested capital.

Opinions of Professional Accounting Associations on the Statement of Income

The two major professional accounting organizations of the United States have expressed their positions as to the content of the statement of income in the following language:

(9). The income of an accounting period should be reported in a statement providing an exhibit of all revenue and expense (including losses) given accounting recognition during that period. This practice assumes that the income statements for a period of years will disclose completely the entire income history of that period.

(10). The income statements should be arranged to report consistently and in reasonable detail the particulars of revenue and the expense pertaining to the operations of the current period, measured as accurately as is possible at the time the statement is prepared and also any items of revenue or expense not associated with the operations of the current period. Such arrangement of data in a single statement discloses both the earning performance and the entire income history of the enterprise during a given period.[1]

11. The committee has indicated that in its opinion it is plainly desirable that over the years all profits and losses of a business be reflected in net income, but at the same time has recognized that, under appropriate circumstances, it is proper to exclude certain material charges and credits from the determination of the net income of a single year, even though they clearly affect the cumulative total of income for a series of years. In harmony with the view, it is the opinion of the committee that there should be a general presumption that all items of profit and loss recognized during the period are to be used in determining the figure reported as net income. The only possible exception to this presumption relates to items which in the aggregate are material in relation to the company's net income and are

[1] American Accounting Association, *Accounting Concepts and Standard Underlying Corporate Financial Standards* (1948).

clearly not identifiable with or do not result from the usual or typical business operations of the period. Thus, only extraordinary items such as the following may be excluded from the determination of net income for the year, and they should be excluded when their inclusion would impair the significance of net income so that misleading inferences might be drawn therefrom:

(a) Material charges or credits (other than ordinary adjustments of a recurring nature) specifically related to operations of prior years, such as the elimination of unused reserves provided in prior years and adjustments of income taxes for prior years;

(b) Material charges or credits resulting from unusual sales of assets not acquired for resale and not of the type in which the company generally deals;

(c) Material losses of a type not usually insured against, such as those resulting from wars, riots, earthquakes, and similar calamities or catastrophes except where such losses are a recurrent hazard of the business;

(d) The write-off of a material amount of intangibles;

(e) The write-off of material amounts of unamortized bond discount or premium and bond issue expenses at the time of the retirement or refunding of the debt before maturity.[2]

The Organization of the Statement of Income

An effective statement of income should be organized so that major types of information stand clearly revealed. The amount of detail to be included depends primarily upon the purpose which the statement is to serve. Suffice it to say that enough information should be included to permit a worth-while analysis to be made of the income statement.

In the order of their appearance upon the statement, the principal divisions of an all-inclusive statement of income would be as follows:

Net Sales
Cost of Sales
Gross Profit
Selling Expenses
General Expenses
Net Profit from Operations
Other Income
Other Expense
Special Income Credits (or Additions to Income)
Special Income Debits (or Deductions from Income)
Net Income before Income Taxes
Provision for Income Taxes
Net Income.

The statement of income may be prepared in full detail, as illustrated on page 496, or it may be condensed by having separate schedules to support major types of information, thus:

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[2] American Institute of Certified Public Accountants, *Accounting Research Bulletin No. 43* (New York: 1953), p. 63.

Manchester Manufacturing Company

STATEMENT OF INCOME
YEAR ENDED DECEMBER 31, 1958

Net Sales, less sales discounts		$600,000.00
Cost of Sales (Schedule #1)		365,000.00
Gross Profit		$235,000.00
Selling Expenses (Schedule #2)	$107,500.00	
General Expenses (Schedule #3)	59,500.00	167,000.00
Net Profit from Operations		$ 68,000.00
Other Income (Schedule #4)		12,000.00
		$ 80,000.00
Provision for Income Taxes		20,000.00
Net Income		$ 60,000.00

Schedule #1

Manchester Manufacturing Company

STATEMENT OF COST OF GOODS MANUFACTURED AND SOLD
YEAR ENDED DECEMBER 31, 1958

Finished Goods, December 31, 1957		$120,000.00
Cost of Goods Manufactured in 1958:		
Work in Process, December 31, 1957	$ 40,000.00	
Raw Materials Consumed	128,000.00	
Direct Labor	100,000.00	
Manufacturing Expenses	110,000.00	
	$378,000.00	
Work in Process, December 31, 1958	50,000.00	328,000.00
		$448,000.00
Finished Goods, December 31, 1958		85,000.00
		$363,000.00
Add Unabsorbed Manufacturing Expense		2,000.00
Cost of Sales		$365,000.00

Schedule #2

Manchester Manufacturing Company

SELLING EXPENSES
YEAR ENDED DECEMBER 31, 1958

Advertising Expense	$ 15,000.00
Delivery Expense	14,000.00
Depreciation Expense—Delivery Equipment	7,500.00
Insurance Expense	1,000.00
Sales Service	40,000.00
Traveling Expense	20,000.00
Miscellaneous Expense	10,000.00
	$107,500.00

Schedule #3

Manchester Manufacturing Company

GENERAL EXPENSES

YEAR ENDED DECEMBER 31, 1958

General Salaries	$35,000.00
Insurance Expense	200.00
Office Supplies Expense	6,000.00
Bad Debts Expense	3,500.00
Depreciation Expense—Office Equipment	6,000.00
Miscellaneous Expense	8,800.00
	$59,500.00

Schedule #4

Manchester Manufacturing Company

OTHER INCOME

YEAR ENDED DECEMBER 31, 1958

Dividend Income	$ 7,000.00
Interest Income	5,000.00
	$12,000.00

Percentage analysis, if desired, may be made a part of the statement of income. Each item of the statement of income is expressed as a percentage of net sales, which is taken as 100%. This is illustrated in the comparative statement of income on page 601. In addition each expense group may be analyzed in the following manner:

Schedule #2

Manchester Manufacturing Company

SELLING EXPENSES

YEAR ENDED DECEMBER 31, 1958

		Ratio to	
	Amount	*Total Selling Expenses*	*Sales*
Advertising Expense	$ 15,000.00	13.95%	2.50%
Delivery Expense	14,000.00	13.02	2.33
Depreciation Expense—Delivery Equipment	7,500.00	6.98	1.25
Insurance Expense	1,000.00	0.93	0.17
Sales Salaries	40,000.00	37.21	6.67
Traveling Expense	20,000.00	18.61	3.33
Miscellaneous Expense	10,000.00	9.30	1.67
	$107,500.00	100.00%	17.92%

Percentage analysis is often of particular value to the management of a business in dealing with the elements which unfavorably affect the profit performance of the business.

In making percentage comparisons of expenses to sales, the analysis should logically not go beyond the value for net-profit-from-operations because revenues from "other income" may be used to cover the "other expenses" of a business.

When manufacturing costs are made the subject of percentage analysis, the schedule of cost of goods manufactured is used. Individual costs are compared with the cost of goods manufactured, which is taken as 100%.

For managerial control purposes a valuable type of percentage analysis—especially useful in connection with interim financial statements—is a comparison of the percentages of a current month with the percentages which represent cumulative figures for the year to date. Also highly useful are comparisons of cumulative statements for the year to date with last year to date. And, for purposes of *current* control, comparisons of cumulative figures for the current year to date may be made with budgeted figures. This is a type of comparison especially valuable to managements in measuring and controlling the *performances* of their businesses.

Standards for Statements of Income

A statement of income should observe certain standards:

1. It should have a proper heading:

Name (of business)

Statement of Income for the _____ ended _____ 19__

2. It should show the net profit earned from operations and the net income earned from all sources.

3. It should show the profitability of

Products	Divisions	Branches
Departments	Stores	

and so on, as far as it is practicable to do so. This information may be presented by means of multicolumn statements of income or by summary statements of income supported by subsidiary schedules. The latter arrangement is more common.

4. It should group expenses by responsible authority. Some businesses endeavor to make a further analysis of expenses by dividing the values of an expense group into two parts, one part representing controllable expenses, the other part representing noncontrollable expenses. This is a commendable type of analysis—and one which is highly useful to management—even though limitations inevitably arise because serviceable lines of demarcation between variable and fixed expenses cannot always be precisely established.

5. Each kind of earned income should be charged with all costs, direct and indirect, which have been incurred in the earning of this income.

6. It should exhibit uniformity as to

a) layout which, in turn, should be logical;
b) terminology (titles should be modern and meanings should be clear);
c) the content of each section and sectional subdivision;
d) the period covered (this is important for comparative purposes).

7. It should be well organized, informative, and complete. Its values should be fair, in conformity with accepted principles of accounting, consistently applied.

8. It should be a statement of current interest. Both interim and annual statements of income should be prepared promptly so as to enable the management of a business to *act* when action is needed.

The Function of "Profit" in the American Social Order

The statement of income assumes added stature when users of statements of income understand the importance of "profit" to the American social order. This understanding is especially important, for example, when measures are advanced by sponsors who propose to

1. limit or control the "profits" of private business,
2. tax "profits" more and more heavily, and
3. force new costs upon business with the accompanying demand that these added costs be absorbed by existing levels of "profit."

To counter proposals of this nature successfully, a knowledge of the function of "profits" is essential.

When the "profits" of a business or industry are not large enough to attract capital, especially equity capital, or when they fail to provide funds sufficient to purchase new assets (at higher price levels) as replacements of old, inefficient, or worn-out productive facilities, the inevitable result is a decline in the flow of capital to the affected business or industry, causing, in turn,

1. a restriction in the volume of new productive assets constructed or manufactured;
2. an increase in the cost of doing business—because old, inefficient facilities, coupled with decreased volume, are high-cost facilities;
3. a lessened volume of production with its sequential decrease in jobs (i.e., an increase in unemployment).

It follows, then, that "profits" are very important to the success of the American social order. Because of this importance, the function of "profits" should be well understood by businessmen and prospective businessmen. It follows also that a high degree of technical and professional skill is properly to be demanded of those individuals who are responsible for fairly determining the "profits" of a business. The determination of income and income costs is, of course, the responsibility of the accountant.

The Statement of Income and Retained Income (or Earned Surplus)

The statement of income reports upon the amount of net income which has been earned by a business over a specified period of time. This net income is that remaining after the consolidation of all the gains, costs, and losses of a business for the period.

The statement of retained income (or earned surplus) reports upon the changes in net worth as represented by the Retained Income (or Earned Surplus accounts). These changes include changes not explained by the statement of income.

These two statements are sometimes combined into one single statement of income-and-retained-income, as initially discussed and illustrated on page 419. After the net income of an accounting period has been set forth, the statement of income is concluded by a section containing a complete reconciliation of retained income (or earned surplus).

A condensed statement of income and retained income for the Manchester Manufacturing Company for the year 1958 would be as follows:

Manchester Manufacturing Company

STATEMENT OF INCOME AND RETAINED INCOME
FOR THE YEAR ENDED DECEMBER 31, 1958

Net Sales, less sales discounts		$600,000.00
Cost of Sales		365,000.00
Gross Profit		$235,000.00
Selling Expenses	$107,500.00	
General Expenses	59,500.00	167,000.00
Net Profit from Operations		$ 68,000.00
Other Income		12,000.00
		$ 80,000.00
Provision for Income Taxes		20,000.00
Net Income		$ 60,000.00
Retained Income, December 31, 1957		217,000.00
		$277,000.00
Less Cash dividends declared in 1958		73,000.00
Retained Income, December 31, 1958		$204,000.00

This *combined* statement is a full explanation of the change in net worth, as measured by the account with Retained Income, from December 31, 1957, to December 31, 1958.

Although this statement was illustrated in condensed form, it might have been presented so as to include a full measure of detail. This detail could have been incorporated directly in the statement or it might have been presented by means of supporting schedules as illustrated on page 594.

When unusual or extraordinary gains and losses, including adjustments of the net incomes of prior accounting periods, are included in a current comprehensive statement of income, it is of the utmost importance to distinguish between the

net profit earned on operations, and the
net income earned from all sources.

This distinction is important in order to distinguish clearly between the income earned on *operations* and that which is the result of all of the transactions of an accounting period.

New Forms of the Statement of Income

Throughout this book the statement of income has consistently adhered to one design, called the "multiple-step" style of statement. This style of statement has long been used by both educators and practicing accountants. Is this statement a "perfect" style of statement? Can it be improved so as to be more serviceable? Are there other forms of the statement of income?

In contrast to the multiple-step style of income statement is the "single-step" statement, a form of statement that has appeared with some frequency in recent years, especially in the annual reports of corporations. This style of statement is illustrated by the following income statement:

Armco Steel Corporation

STATEMENT OF CONSOLIDATED INCOME

For the year ended December 31, 1955

REVENUES	
Sales, less discounts, returns and allowances	$692,683,234
Dividends, royalties, interest, etc.	8,307,083
TOTAL	$700,990,317
COSTS AND EXPENSES	
Employment Costs	
Wages and salaries	$176,832,328
Social security taxes	3,254,112
Pensions and group insurance	9,846,914
TOTAL	$189,933,354
Materials and services	336,319,012
Depreciation	33,880,730
Loss on assets retired	871,019
Interest and expense on long-term debt	2,045,660
Other charges	831,897
State, local, and miscellaneous taxes	6,144,249
Federal income taxes	66,613,787
TOTAL	$636,639,708
NET INCOME FOR THE YEAR	$ 64,350,609

Does this statement represent an improved form of income statement? Those who support the single-step form of income statement favor it for several reasons:

1. It is simple in organization and easy to understand.
2. It reflects the fact that all of the incomes and costs of a business are on the same level, i.e., they attach to the enterprise as a whole. In

contrast, the multiple-step statement of incomes seems to imply that some costs take precedence over other costs and that, accordingly, there is a distinct profit earned and remaining after each group of costs has been deducted. Actually, this is not true; there is simply one profit, the net income remaining after all costs have been deducted.

3. It does not imply that some incomes like "other income" are earned without cost.

New forms of the income statement suggest, basically, that the conventional form of income statement has not always been entirely satisfactory. New forms are examples of the pressures which exist for better statements. They may be characterized as being both evolutionary and exploratory as accountants seek to develop improved statements.

For the layman the statement of income is sometimes made more informative by the abandonment of conventional accounting terms and the substitution of such titles as

This is what we took in
This is what we expended
This is what we had left

and so on. One example of this style of statement is a recent statement of the Interlake Iron Corporation:

The Corporation received:		
From the sale of 1,505,988 tons of pig iron . . .	$ 86,648,269	87%
From the sale of 75,289 tons of coke	1,252,287	1
From the sale of coal, ore, gas and coal chemicals .	10,921,538	11
From dividends, royalties, rents, interest, etc . .	1,348,926	1
A total of	$100,171,020	100%
Which it used for:		
Materials and services purchased from others . .	$ 61,058,071	61%
Wages and salaries and pension costs	12,421,039	12
Interest	533,153	1
Federal, state and local taxes	10,827,822	11
Depreciation, depletion and amortization	6,789,149	7
As well as for:		
Dividends to stockholders	3,903,468	4
Retained for use in the business	4,638,318	4
	$100,171,020	100%

In this book the discussion of new forms of the statement of income must be limited to remarks of an introductory nature. The prime purpose of this section is to bring out the fact that other forms of the statement of income exist and to suggest the wisdom of an open mind on the part of student, educator, and practicing accountant in constructing, and appraising, new forms of the statement of income. In this respect it is eminently proper to regard new and experimental forms of the statement of income as steppingstones to the better statements of tomorrow.

From the standpoint of management, the statement of income should always be organized in a manner which will *best* reflect the *operations* of a

business. This means that the presentation of financial information on the statement of income is made most effectively when there is an *understanding* of the *operations* of a business supplemented, if possible, by an understanding of the thinking underlying the policy-determining directives of management. When so constructed, financial statements will be highly useful to management not only for appraising the efficiency of the current operations of a business and the adequacy of the net profit produced by these operations but also for appraising the efficiency of current operations as compared with estimated results under possible alternative courses of action.

Comparative Statements of Income

Comparative statements of income are especially useful for purposes of financial analysis. Trends and changes are revealed. There is greater opportunity for the proper evaluation of these trends and changes—and financial results—by intelligent interpretation and analysis.

Manchester Manufacturing Company

COMPARATIVE STATEMENT OF INCOME
FOR THE YEARS ENDED DECEMBER 31, 1958, AND 1957

	1958	*%*	*1957*	*%*	*+ Increase − Decrease*
Sales	$625,000.00	104.17	$588,000.00	105.00	+$37,000.00
Less Returned Sales, etc.	25,000.00	4.17	28,000.00	5.00	− 3,000.00
	$600,000.00	100.00	$560,000.00	100.00	+$40,000.00
Cost of Sales	365,000.00	60.83	353,000.00	63.04	+ 12,000.00
Gross Profit	$235,000.00	39.17	$207,000.00	36.96	+$28,000.00
Selling Expenses:					
Advertising Expense	$ 15,000.00	2.50	$ 9,000.00	1.61	+$ 6,000.00
Delivery Expense	14,000.00	2.33	11,000.00	1.96	+ 3,000.00
Depreciation Expense—Delivery Equipment	7,500.00	1.25	7,500.00	1.34	
Insurance Expense	1,000.00	0.17	1,000.00	0.18	
Sales Salaries	40,000.00	6.67	38,000.00	6.78	+ 1,000.00
Traveling Expense	20,000.00	3.33	22,000.00	3.93	− 2,000.00
Miscellaneous Expense	10,000.00	1.67	11,000.00	1.97	
	$107,500.00	17.92	$ 99,500.00	17.77	+$ 8,000.00
General Expenses:					
General Salaries	$ 35,000.00	5.84	$ 33,000.00	5.89	+$ 2,000.00
Insurance Expense	200.00	0.03	200.00	0.04	
Office Supplies Expense	6,000.00	1.00	5,000.00	0.89	+ 1,000.00
Bad Debts Expense	3,500.00	0.58	6,800.00	1.21	− 3,300.00
Depreciation Expense—Office Equipment	6,000.00	1.00	6,000.00	1.07	
Miscellaneous Expense	8,800.00	1.47	8,000.00	1.43	+ 800.00
	$ 59,500.00	9.92	$ 59,000.00	10.53	+$ 500.00
Total Operating Expenses	$167,000.00	27.84	$158,500.00	28.30	+$ 8,500.00
Net Profit from Operations	$ 68,000.00	11.33	$ 48,500.00	8.66	+$19,500.00
Other Income:					
Dividend Income	$ 7,000.00	1.17			+$ 7,000.00
Interest Income	5,000.00	0.83	$ 5,000.00	0.89	
	$ 12,000.00	2.00	$ 5,000.00	0.89	+$ 7,000.00
Net Income before Income Taxes	$ 80,000.00	13.33	$ 53,500.00	9.55	+$26,500.00
Provision for Income Taxes	20,000.00	3.33	10,000.00	1.78	+ 10,000.00
Net Income	$ 60,000.00	10.00	$ 43,500.00	7.77	+$16,500.00

Analysis of these statements reveals that 1958 was a better year than 1957. For instance:

Net sales increased from	\$560,000.00 to \$600,000.00
an increase of	\$ 40,000.00 or 7.4%
Gross profits increased from	\$207,000.00 to \$235,000.00
an increase of	\$ 28,000.00 or 13.53%
This increase is more than the percentage increase in sales. This is due to an increase in the rate of gross profit from	36.96% to 39.17%
Selling expenses increased from	\$ 99,500.00 to \$107,500.00
an increase of	\$ 8,000.00 or 8.04%.
Related to sales, however, the increase is nominal	17.77% to 17.92%.
General expenses increased from	\$ 59,000.00 to \$59,500.00
an increase of	\$ 500.00 or 0.85%.
Related to sales, however, they decreased from	10.53% to 9.92%.
Net profit from operations increased from	\$ 48,500.00 to \$68,000.00
an increase of	\$ 19,500.00 or 40.21%.
Related to sales, an increase of[3]	8.66% to 11.33%.
Although income taxes increased from	\$ 10,000.00 to \$20,000.00
an increase of	\$ 10,000.00 or 100%.
Net income after income taxes increased from	\$ 43,500.00 to \$60,000.00
an increase of	\$ 16,500.00 or 37.93%.
Related to sales net income increased from	7.77% to 10.00%.

This type of analysis is useful not only for the purpose of judging the effectiveness of past business operations but also for the purpose of contributing to management's efforts to produce satisfactory and, possibly, improved future statements of income. Accounting information, it should be borne in mind, is gathered not for its own sake but in order to be *used*. Accounting values, and the changes occurring in them from period to period, should be examined by management so that corrective action *when necessary* can be *promptly* taken for the improvement of both present and prospective future operations.

Analyses of the operations of several years may often reveal tendencies or trends of favorable or unfavorable import not readily discernible from two annual statements of income. Decreasing ratios of gross and net profit or a steady rise in the ratio of interest expense to gross revenues would be interpreted as omens of unfavorable portent. Increasing ratios of gross and net profits would be interpreted favorably.

Many companies furnish their stockholders with comparative statements ranging from two to ten years or more.

In addition to the ratios illustrated on page 601, other ratios will often be found useful in measuring the effectiveness of comparative business operations. Among these ratios are the following:

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[3] The difference between 100% and the per cent of net operating profit is the "operating ratio" of a company.

Net sales per employee
Net sales per $1,000.00 of (a) fixed assets (b) total assets
Operating profit per employee
Operating profit per $1,000.00 of (a) fixed assets (b) total assets
Net income per employee
Net income per $1,000.00 of (a) fixed assets (b) total assets

INTERIM REPORTS To improve the comparability of interim financial statements, some companies use an accounting year of 13 months divided into 28 days each. Each month has 24 business days and 4 Sundays. Interim financial reports are prepared for each 28-day period. Among the companies which use the 13-month year are Best Foods, Inc., Corning Glass Works, Eastman Kodak Company, The Kroger Grocery & Baking Company, and Sears, Roebuck & Company.

A very useful kind of interim report is the statement of income which in one column gives the figures for the current month and, in the second column, cumulative figures for the year to date. These cumulative statements are very useful to a business which is operating under a budget. The control of operations is made more intelligent and effective by comparing actual figures with those of the budget, and then taking whatever action the comparisons seem to require.

Another very useful kind of interim statement for comparative purposes is the preparation of a statement of income for a current month supplemented by a statement of income for the 12 months ending with the current month. The current month is compared with last month and with the cumulative 12-month statements for preceding months. By these comparisons it is possible for the management of a business to be kept constantly informed not only with respect to current changes but with respect to secular trend as well.

EXPENSE CONTROL In order promptly to locate and correct unfavorable operating costs, the selling and general administrative costs of a business should be examined, analyzed, and compared on both monthly and cumulative bases. Comparisons of the expense figures of one month can be made with those of the immediately preceding month, but comparisons are likely to be more effective if the figures for a given month are compared with those for the same month of the preceding fiscal year, and if cumulative values for a current year are compared with those of the preceding year.

Management should find it worth while to analyze thoroughly the *productivity* of its general costs of doing business. Are these costs productively worth while? Are they reasonable in amount? Can any of them be reduced without loss of business efficiency? If, for example, it costs $14,000.00 to pay office rent on 100 4-drawer file cabinets, are all of these costs and cabinets really necessary? If the ratio of net profit to sales is 5%, sales

of $280,000.00 must be made in order to earn enough to pay the rental costs of $14,000.00. Again, are all of these costs and cabinets really necessary?

Selling and distribution costs are high for many businesses. These expenditures should be analyzed by nature and function for purposes of cost control. Although this is a valuable kind of analysis, the effective control of distribution costs really requires an analysis of the costs incurred in the *various ways* by which the *sales* of a period have been made. Analyses may be made of the costs incurred in making sales of varying classifications:

Territories
Products
Departments
Methods of sale, i.e., wholesalers, retailers, direct-to-consumer by (a) mail order, and (b) other
Classes of customers, i.e., independent unit stores, chain stores, and so on
Salesmen
Small and large orders by (a) money values and (b) quantities
Terms of sale, i.e., cash, short-term credit, long-term credit

When management has detailed information of this character, it is in a position to make adjustments of out-of-line costs and intelligently to funnel future costs into the channels containing the most promising sales and profit possibilities.

Accounts Not Easily Classified

The proper classification of accounts on the statement of income is not always an easy matter. Some of these "doubtful" accounts are presented in the discussion below, together with comment on their recommended classification.

BAD DEBTS Bad debts can arise only as the result of doing business on credit. Uncollectible accounts receivable are losses—costs of extending credit. They are therefore expenses of the credit department of a business. These expenses are selling expenses if the sales department of a business is charged with the responsibility of credit administration; otherwise they are general expenses. In practice, the Bad Debts Expense account is commonly classified as a general expense.

CONTAINERS If a product is delivered to the purchaser in the container into which it was placed by the manufacturing process, the cost of the container is a manufacturing expense. Otherwise, boxes, cartons, cases, containers, packages, and so on, are selling expenses. *Exception:* If the product of a business is sold in returnable containers, the containers are a fixed

asset. Customers are charged for containers used to ship goods to them and credited for containers returned.

DEPRECIATION EXPENSE Depreciation expense on fixed assets used by a manufacturing department should be classified as a manufacturing expense; depreciation expense on fixed assets used by the sales department should be classified as a selling expense; and depreciation expense on fixed assets used for general office purposes should be classified as a general expense.

FREIGHT IN Freight paid on purchases of merchandise is an increase in the cost of that merchandise. Accordingly, Freight In is an account appearing in the cost-of-goods-sold section of the statement of income.

The inventory of a business, being valued at cost, should include a value representing proportionate freight applicable to this cost.

If freight is paid on selling or general expense items, then the freight paid on these items is a selling or a general expense as the case may be. Freight paid on fixed assets is an addition to the cost of these assets.

Manufacturing companies sometimes find it difficult to allocate freight in to purchases. This is especially likely to be the case when perpetual inventory records are kept. They often find it practical therefore to handle freight in as an item of manufacturing expense, or to handle it according to the principles embodied in the next paragraph.

Trading concerns sometimes handle freight on merchandise in the following manner:

1. All payments for freight on merchandise are debited to an asset account called Merchandise Freight.
2. At the end of the accounting period, an entry is made:

Cost of Sales	xxx xx	
Merchandise Freight		xxx xx
To debit Cost of Sales with freight applicable to merchandise sold.		

The amount transferred is computed by applying the ratio

$$\frac{\text{Transportation charges paid on beginning inventory and purchases}}{\text{Beginning inventory plus purchases}}$$

to the invoice cost of merchandise sold.

FREIGHT OUT Disbursements made for freight paid on sales should be classified as

1. deductions from sales if the selling price f.o.b. destination is more than the selling price f.o.b. shipping point;
2. selling expenses in all other cases.

INCOME TAXES Income taxes are levied on a calendar or fiscal year basis. They are not operating expenses incurred to produce income as is the case with respect to advertising expense or wages and salaries, for example. Based on taxable income, income taxes are compulsory expenditures in favor of federal and state governments, the cash payment of the liability being obligatory. When the annual financial statements of a business are being prepared, income taxes should be recorded by an adjusting entry of the following type:

Provision for Income Taxes		xxx xx
Income Taxes Payable		xxx xx
To record estimated liability for income taxes for the year ended December 31, 19__.		

On the statement of income, the provision for income taxes should be shown as follows:

Net Income before Income Taxes	$xxx xx
Less Provision for Income Taxes	xxx xx
Net Income	$xxx xx

INTEREST Interest is a payment for the use of capital. Because interest is distinctively financial in nature, accountants have generally classified interest expense as "other expense" and interest income as "other income" on the statement of income.

PROFITS AND LOSSES ON FIXED ASSETS Profits and losses arising from the sale or retirement of fixed assets appear in the accounts

Gain on Sale or Retirement of Fixed Assets, and
Loss on Sale or Retirement of Fixed Assets:

On the statement of income it is general accounting practice for these two accounts to be handled as a part of net-profit-from-operations when

1. transactions involving the sale or retirement of fixed assets are fairly common;
2. the total net gain or net loss contained in these transactions is fairly constant in amount from period to period; and
3. the amount of this net gain or net loss is small and of minor importance.

When transactions involving the sale or retirement of fixed assets have been infrequent, and when the gains or losses realized have been significant, they should appear as special debits or credits to income in the all-inclusive statement of income.

PROFITS AND LOSSES ON SECURITIES Profits realized by the sale of securities which have been classified as part of the working capital of a business

should be classified as "other income" on the statement of income. Losses, conversely, should be classified as "other expense."

The problem of classification is not so clear with respect to profits realized by the sale of securities *not* classified as current assets. Where the profits are concomitants of security sales made more or less regularly from period to period, the sales would seem to be a miscellaneous but relatively regular business activity. In this kind of circumstance, it would appear proper to regard profits on security sales as "other income" and to regard losses on security sales as "other expense."

On the other hand, changes in the investment portfolio of a business may be so infrequent as to preclude the classification of these transactions as a miscellaneous but regular business activity. If the profits and losses are values of insignificant amounts, they can be classified as "other income" or as "other expense." If the values are significant, the profits and losses on security sales should be handled as special income credits or debits on the all-inclusive statement of income.

PURCHASES DISCOUNTS For many years it was common practice to classify purchases discounts as "other income" on the statement of income. Today, however, purchases discounts are classified as direct deductions from purchases. This classification rests on the reasoning that income cannot be earned by disbursement acts only. If purchases discounts were "other income," it would follow that income of this kind could be realized whenever a bill for merchandise is paid, less proper deduction for cash discount. This would mean that income could be earned not only by the sale of goods but also by their purchase. The truth, of course, is that income can be realized *only* by the *sale* of the purchased merchandise. Indeed, as indicated by accounting theory, income cannot be earned by the purchase of anything.

Cash discounts are simply a reduction of the sales price to the seller and a reduction of the purchase cost to the buyer. That purchases discounts are reductions of the cost of merchandise should be readily apparent where Company A offers an article for sale at a price of $1,000.00 net, and Company B offers the same article at a price of $1,000.00, less 2% cash discount. In this circumstance it is obvious that the purchase should be made from Company B.

When a cash discount is denied to a purchaser because the period of cash discount has expired, the amount of purchase discount is a penalty imposed upon the buyer for additional time in which to make settlement. The amount of this penalty is *not* an interest charge. When terms of payment, for example, are 2/10, n/30, and the cash discount period has expired, the extra 2% paid by the buyer for another 20 days of credit is equal to 36% on an annual basis. No one to whom bank credit is available would pay 36% for the use of money.

It is to be observed, further, that when purchases discounts are handled as "other income" on the statement of income, the impression is given that an important amount of additional revenue has been *earned* by management through shrewd administration of matters financial. This, of course, is false. Income cannot be earned by the purchase of merchandise or by disbursements made in payment of merchandise bills. Of significant importance to management, however, is the amount of purchases discounts not taken when bills were paid—the penalty paid because of the failure of a business to pay its merchandise bills within the cash discount period.

SALES DISCOUNTS For many years, also, it was common practice to classify sales discounts as "other expense" on the statement of income. Today, however, sales discounts are classified as direct deductions from sales. This classification rests on the reasoning that the correct value for net sales in the statement of income is the net amount of cash acceptable as a satisfactory settlement of transactions of sales.

The sale price of an article is normally established at that point where, after cash discounts have been allowed for, enough revenue remains to cover all costs and, in addition, yield a profit. The real selling price of an article is the cash price, the amount which will settle the sales invoice. It would be illogical to state that merchandise has one price if paid for within ten days but another price if paid for within thirty days. The cash price is fundamental. Anything over the cash price is a *penalty* paid by the buyer for the privilege of additional days of credit. Merchandise, alone, at its date of sale or purchase has but one price—the cash price. It follows, therefore, that the correct measure of net sales in the statement of income is the yardstick of its cash equivalent.

It is sometimes alleged that sales discounts are expense—inducements offered by a seller to encourage prompt payments by buyers. Customers are expected to pay promptly. Those who do not pay promptly receive special attention from the credit department of a business. The illogical conclusion of this allegation is that more expense (i.e., sales discounts *expense*) is incurred with respect to customers who pay their bills within the cash discount period than with customers who do not.

Sales Taxes

In many states (and some cities) a sales tax is levied on retail sales. As a general rule the collection is made by the retailer who, in turn, remits periodically to the state treasurer (or city treasurer).

Since his role is that of a tax collector, the retailer should not allow his collections of sales taxes to be credited to income accounts or his re-

mittances of sales taxes to be debited to expense accounts. Sales taxes should be accounted for as follows:

Cash (or Accounts Receivable)	10,200.00	
Sales		10,000.00
Liability for Sales Tax		200.00
To record sales of $10,000.00, and liability for 2% sales tax.		

If, for any given period, the amount paid to the state treasurer is the amount of sales tax collections, the disbursement will be recorded simply:

Liability for Sales Tax	xxx xx	
Cash		xxx xx
To record remittance of sales tax collections to state treasurer.		

If the amount to be remitted to the state treasurer is a certain percentage of net sales, the check will differ from the amount of sales tax actually collected from customers. This will be the case because of such reasons as no tax on small sales, no tax on nonmerchandise sales, failure to collect some sales taxes, and possible variations in the rates of sales tax on individual retail sales. For any given period any difference between the amount of sales tax remitted to the state treasurer and the amount of sales tax collections is an item of expense or gain to the retail merchant.

An alternative "businessman's" method of accounting for sales taxes is that of crediting Sales with the total of sales and sales taxes. At the end of the accounting period, Sales is debited and Liability for Sales Tax credited for the amount required to be remitted to the State Treasurer. Discrepancies between collections and payments are absorbed in the Sales account.

Social Security Taxes

Social security taxes are costs which represent part of the privilege of living and working in a society which pays social security benefits to its citizens. Social security taxes are of two kinds

1. OLD-AGE AND SURVIVORS INSURANCE Commonly referred to as O.A.S.I. or as F.I.C.A. (Federal Insurance Contributions Act), this tax is levied in order to provide qualified workers in covered industries with cash benefits upon their retirement at age sixty-five. Should a worker die before reaching the age of sixty-five, benefits are provided to his family.

These taxes apply to the first $4,800.00 of the wages and salaries paid in a calender year to each employee subject to the Federal Insurance Contributions Act, as amended. The rates of tax prescribed by the Internal Revenue Code of 1954 and amended in 1958 are as follows:

1954–58 (on earnings of $4,200.00)	2 %	1963–65	3½%
1959 (on earnings of $4,800.00)	2½	1966–68	4
1960–62	3	1969 and thereafter	4½

These rates are assessed against the payroll base, the amount so determined being a tax assessed against both the employer and the employee. The tax levied upon employees must be withheld from payments to them for wages and salaries. The tax withheld plus his own tax must be paid by the employer to his district director of internal revenue in the month following the close of a calendar quarter. With his payment, the employer must file Form 941 and triplicate copies of all withholding statements, Form W-2a. However, if the combined amount of all old-age benefit taxes (i.e. those levied on both the employer and his employees) and withheld income taxes exceeds $100.00 in any month other than March, June, September, or December, the amount of these taxes must be paid to an authorized bank by the 15th of the following month. Payments for March, June, September, or December must be made by the end of the following month. Depositary receipts are issued by the bank. If these monthly payments have been made when due, the quarterly return (Form 941) is due by the tenth day of the second month following the close of the calendar quarter. Payments of the tax shown on this form will be evidenced by attaching the depositary receipts received from the bank.

2. UNEMPLOYMENT INSURANCE The object of this tax is that of providing qualified workers with cash benefits for limited periods of unemployment. From the funds provided by this tax, the cash benefits are actually distributed by the various states in administering their individual unemployment insurance programs.

Unemployment insurance taxes of 3%, payable each January 31 for the preceding calendar year, are assessed against employers of four or more individuals. By the provisions of the Federal Unemployment Tax Act, the tax is not levied on employees. It is a tax (reported on Form 940) assessed against the first $3,000.00 paid to an employee during a calendar year. Employers are allowed a credit against the liability for federal tax for payments made by them to state unemployment funds for amounts not to exceed 90% of the gross amount of federal tax. Thus, in effect, the rate of federal tax would become 0.3% of the payroll base and the state tax, 2.7%.

All states have unemployment compensation programs. Generally, the state tax rate in each of the 48 states is a basic 2.7% of the first $3,000.00 paid to an employee. In some states there is provision for a higher rate should this be necessary to meet disbursements for unemployment compensation. A few states require a tax on employees. All states require

employers to maintain payroll records showing, for each employee, information such as the following:

Name
Address
Social Security Acct. No.

Date: Hired
Rehired
Discharged
Laid off
Quit

Payroll period
Hours worked
Taxable earnings

Reason for termination of employment

To illustrate the basic accounting involved for payroll taxes, assume that a payroll for December, 1957, $125,000.00 is to be recorded. Of this amount $80,000.00 is subject to O.A.S.I. taxes of 2% and $112,000.00 is subject to unemployment taxes of 3%. The tax of 2% is levied against both the employer and the employee. The unemployment tax is levied against the employer only and is payable 2.7% to the state treasury and 0.3% to the federal treasury. Income taxes withheld from employees' pay checks amount to $17,000.00. The journal entries to record the payroll and all taxes relating to this payroll would be:

Wages Expense	125,000.00	
Withholding Income Taxes Payable		17,000.00
Social Security Taxes Payable		1,600.00
Wages Payable		106,400.00

To record the payroll for December as per payroll register.
Federal O.A.S.I. taxes withheld are 2% × $80,000.00 = $1,600.00.

Note. The amount of income tax withheld from the pay check of an employee depends upon his gross pay and the number of his personal exemptions. Amounts to be withheld from employees' pay checks are fixed in wage-bracket withholding tables furnished by the Internal Revenue Service.

Social Security Taxes (or Payroll Taxes)	4,960.00	
Social Security Taxes Payable		4,960.00

To record payroll taxes levied on employer:
O.A.S.I. taxes: 2% × $ 80,000.00 = $1,600.00
Unemployment taxes: 3% × 112,000.00 = 3,360.00
$4,960.00

When the payroll is paid, the entry is simply a debit to Wages Payable and a credit to Cash, $106,400.00. When the income and O.A.S.I. taxes are paid, the Withholding Income Taxes Payable and Social Security Taxes Payable accounts are debited for $17,000.00 and $3,200.00, respectively, and Cash credited, $20,200.00. When the unemployment taxes of $3,360.00 are paid, two checks will be issued: one check to the state treasurer for 90% × $3,360.00, or $3,024.00; and one check to the district director of internal revenue for 10% × $3,360.00, or $336.00. The entry

for these two checks is simply a debit to Social Security Taxes Payable and a credit to Cash, $3,360.00.

On the statement of income, social security taxes (expense) should receive the same accounting classification as the wages and salaries to which they relate. A tax on direct labor would be an increase in the direct cost of that labor; a tax on indirect labor would be a manufacturing expense; a tax on wages and salaries of the sales department would be a selling expense; and a tax on wages and salaries of the general office salaries of a business would be a general expense.

While this theory of classification is sound, some accountants feel that satisfactory over-all results are obtainable by the simple alternative of classifying all social security taxes into two kinds of overhead expense. Under this alternative, social security taxes applicable to the manufacturing operations of a business would be a manufacturing expense; and taxes applicable to the nonmanufacturing activities of the business would be a general expense.

MISCELLANEOUS The classification of an expense is often dependent upon particular circumstances. For instance, traveling expenses of salesmen are selling expenses, whereas traveling expenses of company auditors are general expenses, and traveling expenses of the purchasing agent are purchasing department expenses (if this classification of expense is maintained).

Still other expenses may be apportionable to two or more expense groups. In such cases the expenses should be apportioned to these expense groups upon bases deemed to be equitable. As an example of expense apportionment personal property taxes may be taken as a case in point: these taxes should be allocated to manufacturing, selling, and general expenses, according to the ratios of personal property valuations within each of these divisions of a business. It should be clear that the apportionment of an expense must be reasonably accurate or the apportionment will not be worth while.

Financial Statements Require an Adequate System of Accounts

The preparation and organization of effective financial statements and the assembly of detail incident thereto are dependent upon—and are greatly expedited by—a well-organized system of accounts in the general ledger. Naturally, one of the important requisites of any accounting system is that the accounts should provide all necessary detail. Correlative to this requisite is the necessity that, in the recording of this detail, each account should have a specific function and, consistent with this function, should have uniform accounting treatment from period to period.

The general ledger is the central and controlling record of an accounting system. In it finally come to rest all transactions, either in detail or

in summary. A successful system of accounts, in turn, requires properly planned and executed business papers containing the basic information of all transactions, functional journals for the recording of this information, and satisfactory subsidiary records for the support of the accounts in the general ledger. It is assumed that these procedures are all accompanied by an adequate system of internal control.

The accounts of a business are usually arranged so that the order of accounts in the ledger is the same as the order in which these accounts appear on the financial statements. They are usually arranged in the following sequence:

Current Assets
Investments
Fixed Assets
Intangible Assets
Current Liabilities
Long-Term Liabilities
Capital Stock
Paid-in Surplus
Retained Income (or Earned Surplus)
Sales
Cost of Sales
Selling Expenses
General Expenses
Other Income
Other Expense
Special Income Credits
Special Income Debits
Provision for Income Taxes

When the accounts of a ledger are arranged in this manner, it is common practice to use symbols by which the accounts may be readily identified. These symbols—known as an account code—should be simple, definite, easy to memorize, and flexible. Accounts may be characterized by a number, a letter, or by a combination of numbers and letters. It is common practice to number accounts and to arrange them in the general ledger in their numerical sequence. In this respect loose-leaf ledgers are especially convenient. With regard to the books of original entry, vouchers, and posting procedures, there is obvious convenience in referring to accounts by number rather than by name.

An example of account classification and organization is afforded by the following illustration of a numerical chart of accounts:

ASSETS: 1–99

CURRENT ASSETS: 1–49

1: Cash
2: Petty Cash
5: Notes Receivable
6: Notes Receivable Discounted
7: Accounts Receivable
8: Allowance for Bad Debts
10: Finished Goods
20: Work in Process
30: Raw Materials
40: Accrued Income Receivable
45: Prepaid Expenses

INVESTMENTS: 50–59
- 51: Bonds
- 53: Common Stocks
- 55: Mortgages
- 57: Preferred Stock
- 59: Real Estate

FIXED ASSETS: 60–79
- 61: Buildings
- 62: Allowance for Depreciation of Buildings
- 63: Delivery Equipment
- 64: Allowance for Depreciation of Delivery Equipment
- 65: Furniture and Fixtures
- 66: Allowance for Depreciation of Furniture and Fixtures
- 67: Jigs, Fixtures, Equipment
- 68: Allowance for Depreciation of Jigs, Fixtures, Equipment
- 69: Land
- 71: Machinery
- 72: Allowance for Depreciation of Machinery
- 73: Office Machines
- 74: Allowance for Depreciation of Office Machines
- 75: Tools

INTANGIBLES: 80–89
- 81: Copyrights
- 83: Patterns
- 84: Patents
- 85: Trademarks
- 87: Goodwill

OTHER ASSETS: 90–99
- 95: Organization Expense

LIABILITIES: 100–199

CURRENT LIABILITIES: 100–159
- 100: Income Taxes Payable
- 105: Withholding Income Taxes Payable
- 110: Social Security Taxes Payable
- 120: Payroll
- 130: Accrued Expenses Payable
- 135: Dividends Payable
- 140: Notes Payable
- 150: Vouchers Payable
- 155: Deferred Income

OTHER LIABILITIES: 160–179

LONG-TERM LIABILITIES: 180–199
- 190: Bonds Payable
- 191: Bond Discount

192: Bond Premium
193: Treasury Bonds

NET WORTH: 200–299
CAPITAL STOCK: 200–249
200: Capital Stock—Preferred
225: Capital Stock—Common

SURPLUS: 250–299
250: Paid-in Surplus
275: Retained Income

OPERATING INCOME: 300–399
300: Sales
325: Returned Sales and Allowances
350: Cost of Sales

MANUFACTURING: 400–699
425: Purchases
450: Freight In
475: Returned Purchases and Allowances
501: Direct Labor
600: Manufacturing Expense (Control)
610: Depreciation Expense—Buildings
611: Depreciation Expense—Jigs, Fixtures, Equipment
612: Depreciation Expense—Machinery
613: Depreciation Expense—Tools
620: Factory Repairs
630: Factory Salaries
640: Factory Supplies
650: Heat, Light, Power
660: Indirect Labor
670: Insurance
680: Miscellaneous Factory Expense
690: Taxes (excluding income taxes)

SELLING EXPENSES: 700–799
700: Selling Expense (Control)
701: Advertising
710: Commissions
720: Delivery Expense
730: Depreciation Expense—Delivery Equipment
740: Freight Out
750: Insurance
760: Miscellaneous Selling Expense
780: Sales Salaries
790: Traveling Expense

GENERAL EXPENSES: 800–899
800: General Expense (Control)
801: Administrative Salaries
810: Bad Debts Expense
820: Depreciation Expense—Furniture and Fixtures
821: Depreciation Expense—Office Machines
830: Insurance
840: Miscellaneous General Expense
850: Office Supplies
860: Postage
870: Stationery and Printing
880: Taxes (excluding income taxes)
884: Telephone and Telegraph

OTHER INCOMES: 900–999
925: Interest Income

OTHER EXPENSES: 1000–1099
1025: Interest Expense

SPECIAL INCOME CREDITS: 1100–1199

SPECIAL INCOME DEBITS: 1200–1299

PROVISION FOR INCOME TAXES: 1300–1309

CLEARING AND SUMMARY ACCOUNTS: 1310–1399
1350: Manufacturing
1399: Profit and Loss

When the accounts of a ledger are arranged in the order in which they appear on the balance sheet and the statement of income, it is obvious that the arrangement greatly facilitates preparation of the financial statements. In the chart of accounts illustrated above, certain account numbers in each group were not used; this was done in order to permit proper placement in the ledger of such new accounts as may be required to be opened in the future.

In the foregoing numerical account arrangement, manufacturing expenses were of the 600 series, selling expenses were of the 700 series, and general expenses were of the 800 series. Within each series the expense accounts were arranged both alphabetically and numerically.

For another illustration of a system of accounts see pages 740–743.

Where the accounts of a business are very numerous, the accounts may be arranged according to the principle illustrated in the following numerical arrangement:

600: Manufacturing Expense (Control)
610: Depreciation Expense—Buildings
611: Depreciation Expense—Jigs, Fixtures, Equipment

612: Depreciation Expense—Machinery
613: Depreciation Expense—Tools
620: Factory Repairs
630: Factory Salaries
640: Factory Supplies
650: Heat, Light, Power
660: Indirect Labor
670: Insurance
680: Miscellaneous Factory Expense
690: Taxes (excluding income taxes)

700: Selling Expense (Control)
714: Depreciation Expense—Delivery Equipment
730: Sales Salaries
731: Commissions
765: Advertising
770: Insurance
780: Miscellaneous Selling Expense
794: Delivery Expense
795: Freight Out
796: Traveling Expense

800: General Expense (Control)
812: Depreciation Expense—Office Machines
815: Depreciation Expense—Furniture and Fixtures
825: Bad Debts Expense
830: Administrative Salaries
840: Office Supplies
841: Postage
842: Stationery and Printing
870: Insurance
880: Miscellaneous General Expense
890: Taxes (excluding income taxes)
892: Telephone and Telegraph

In this numerical arrangement of the accounts, similar items have similar numbers, 630 representing Factory Salaries, 730 Sales Salaries, and 830 Administrative Salaries, the "30" of each number indicating salaries.

It is apparent even from this brief discussion of account classification that the accounts of a ledger may be arranged according to various plans. Whatever classification may be adopted in a particular case, the classification should at least have the twin objectives of minimizing the burden of bookkeeping labor as much as possible and also of providing dependable accounting data for the expeditious preparation of balance sheets and statements of income. Professor Kester has summed up the problem of account classification by stating that "in general any classification of accounts is good which serves well its intended use."

PROBLEMS

Problem 28–1. The condensed statements of income for the Royal Candy Company for the years 1958 and 1957 were

	1958	*1957*
Sales	$240,000.00	$115,000.00
Less Returned Sales and Allowances	40,000.00	15,000.00
	$200,000.00	$100,000.00
Cost of Sales	116,000.00	60,000.00
Gross Profit	$ 84,000.00	$ 40,000.00
Selling Expenses:		
Advertising	$ 10,000.00	$ 2,000.00
Commissions	6,000.00	3,000.00
Delivery Expense	4,000.00	2,500.00
Miscellaneous Selling Expense	4,000.00	1,500.00
Sales Salaries	12,000.00	8,000.00
Traveling Expense	5,000.00	3,000.00
	$ 41,000.00	$ 20,000.00
General Expenses:		
General Salaries	$ 12,000.00	$ 9,000.00
Bad Debts	3,800.00	1,000.00
Depreciation Expense	1,500.00	1,500.00
Miscellaneous Expense	3,700.00	2,000.00
Office Supplies	3,000.00	1,600.00
Taxes (other than income)	1,000.00	900.00
	$ 25,000.00	$ 16,000.00
	$ 66,000.00	$ 36,000.00
Net Profit from Operations	$ 18,000.00	$ 4,000.00

Required

What are your conclusions with respect to the company's operations in 1957 and 1958?

Problem 28–2. On December 31, 1958, Howard A. Teele prepared the following financial statements:

STATEMENT OF INCOME

Sales		$43,656.00
Cost of Sales		24,061.00
Gross Profit		$19,595.00
Expenses:		
Advertising	$ 3,020.00	
Freight In	750.00	
General Expense	1,822.00	
General Salaries	12,001.00	
Insurance Expense	360.00	
Sales Taxes	642.00	18,595.00
Net Profit		$ 1,000.00

BALANCE SHEET

Cash	$ 5,201.00
Accounts Receivable	10,162.00
Merchandise Inventory	4,604.00
Miscellaneous Equipment	2,000.00
5% Bonds of Parish County	4,000.00
	$25,967.00
Accounts Payable	$ 5,420.00
Howard A. Teele, Capital	20,547.00
	$25,967.00

Upon examining these statements several weeks later, you find that they did not include the following information as of December 31, 1958:

1. Unpaid advertising bill, $106.00.
2. Prepaid insurance expense, $200.00.
3. Inventory of office supplies, $322.00.
4. Unpaid general salaries, $2,004.00.
5. Depreciation expense for 1958 on miscellaneous equipment, $200.00.
6. The 5% bonds of Parish County were purchased on July 1, 1958. Interest on these bonds is collectible January 1 and July 1.
7. Collections of sales taxes on retail sales have been credited to the Sales account. Three fourths of the sales taxes for the year have been remitted to the state treasurer. The remaining one fourth is due for payment on or before January 31, 1959.
8. Unrecorded merchandise invoice, $80.00. Although it was on hand, December 31, 1958, this merchandise for some reason was not included in the new inventory.

Required

1. Adjusted statement of income for the year ended December 31, 1958.
2. Adjusted balance sheet, December 31, 1958.
(*Note:* Use a work sheet in the preparation of these two statements.)
3. In what respects do these adjusted financial statements differ significantly from the statements prepared by Mr. Teele?

Problem 28–3. The XYZ Company sold 10,000 units of a certain product during the first 11 months of 19__. On a per unit basis, the company's statement of income for these 11 months was

Sales		$1,000.00
Cost of Sales:		
Raw Materials Consumed	$183.00	
Direct Labor	260.00	
Manufacturing Expense	117.00	560.00
Gross Profit		$ 440.00
Selling Expenses	$168.00	
General Expenses	84.00	252.00
Net Profit		$ 188.00

On December 2, 19__, a prospective new customer offered to buy 500 units at a price of $800.00 per unit. Could the management of the XYZ Company afford to consider the offer? Prove factually.

Problem 28–4. From the information below, prepare the statement of income of the Barrett Manufacturing Company for the year ended December 31, 1958. Special care should be taken with respect to form and detail. Use a supporting schedule for the cost of goods manufactured and sold.

Sales	$5,045,000.00
Sales Discounts	45,000.00
Finished Goods, December 31, 1957	164,000.00
Finished Goods, December 31, 1958	85,000.00
Work in Process, December 31, 1957	100,000.00

Work in Process, December 31, 1958	123,000.00
Raw Materials, December 31, 1957	24,000.00
Raw Materials, December 31, 1958	25,000.00
Purchases	1,212,000.00
Purchases Discounts	12,000.00
Freight In	55,000.00
Direct Labor	60,000.00
Depreciation Expense:	
Factory Building	28,000.00
Machinery and Tools	44,000.00
Miscellaneous Equipment	101,000.00
Salesmen's Automobiles	7,000.00
Office Equipment	10,000.00
Factory Salaries	32,000.00
Heat, Light and Power	205,000.00
Indirect Labor	161,000.00
Insurance Expense:	
Factory Building	8,000.00
Finished Goods	5,000.00
Work in Process	8,000.00
Machinery and Equipment	10,000.00
Office Equipment	1,000.00
Raw Materials and Supplies	11,000.00
Salesmen's Automobiles	10,000.00
Maintenance and Repairs (factory)	120,000.00
Miscellaneous Manufacturing Expense	103,000.00
Payroll Taxes:	
Factory	10,000.00
Sales	30,000.00
General Office	20,000.00
Property Taxes (factory)	189,000.00
Advertising Expense	250,000.00
Freight Out	10,000.00
Sales Salaries	900,000.00
Traveling Expense	150,000.00
General Office Salaries	500,000.00
Miscellaneous Expense (general office)	200,000.00
Interest Income	14,000.00
Rent Income	12,000.00
Interest Expense	3,000.00
Profit on Sale of Fixed Assets	16,000.00
Donation to Harvard University	50,000.00
Provision for Income Taxes	254,000.00

Problem 28–5. Following is the trial balance of the Pendleton Manufacturing Company, December 31, 1958:

Cash	$ 40,000.00	
Accounts Receivable	28,000.00	
Finished Goods	14,000.00	
Work in Process	10,600.00	
Raw Materials	15,200.00	
Prepaid Insurance	430.00	
Automobiles	12,000.00	
Allowance for Depreciation—Automobiles		$ 7,000.00
Factory Building	60,000.00	
Allowance for Depreciation—Factory Building		9,200.00

Machinery	40,000.00	
Allowance for Depreciation—Machinery		16,000.00
Office Equipment	3,400.00	
Allowance for Depreciation—Office Equipment		1,440.00
Land	20,000.00	
Income Taxes Payable		7,000.00
Social Security Taxes Payable		2,400.00
Withholding Income Taxes Payable		1,000.00
Accrued Payroll		3,360.00
Dividends Payable		5,000.00
Vouchers Payable		16,000.00
Common Stock, $100.00 par		100,000.00
Retained Income		50,000.00
Sales		214,000.00
Returned Sales and Allowances	1,200.00	
Sales Discounts	3,000.00	
Purchases (of raw materials)	61,500.00	
Returned Purchases and Allowances		1,500.00
Purchases Discounts		2,400.00
Freight In	640.00	
Direct Labor	40,000.00	
Depreciation Expense—Automobiles (factory)	900.00	
Depreciation Expense—Factory Building	1,200.00	
Depreciation Expense—Machinery	4,000.00	
Factory Repairs	4,420.00	
Factory Supplies (expense)	2,200.00	
Heat, Light, and Power	2,110.00	
Indirect Labor	17,000.00	
Insurance Expense (factory)	500.00	
Miscellaneous Factory Expense	1,800.00	
Property Taxes (factory)	1,260.00	
Advertising Expense	6,000.00	
Depreciation Expense—Automobiles (selling)	2,100.00	
Salesmen's Salaries	12,500.00	
Traveling Expense	6,000.00	
Depreciation Expense—Office Equipment	340.00	
Office Expense	1,200.00	
Office Salaries	12,800.00	
Social Security Taxes	3,000.00	
Provision for Income Taxes	7,000.00	
	$436,300.00	$436,300.00

Required

1. Statement of income for the year ended December 31, 1958. If desired, the cost of sales section of the statement may be detailed in a schedule for the cost of goods manufactured and sold. Inventories, December 31, 1958: finished goods, $12,000.00; work in process, $8,000.00; raw materials, $6,600.00. Social security taxes of $3,000.00 should be apportioned: 70% factory, 15% selling, 15% general.
2. Balance sheet, December 31, 1958.

Problem 28–6. Before allowance of 6% interest on loans, and 8% interest on partners' capitals, the condensed trial balance of A and B for the year ended December 31, 19__, was

Miscellaneous Assets	$203,000.00	
Revenues		$ 45,000.00
Expenses	42,000.00	
B—Loan Payable		50,000.00
A—Capital		100,000.00
B—Capital		50,000.00
	$245,000.00	$245,000.00

The firm had commenced business at the beginning of the year with $100,000.00 of capital from A; and $50,000.00 of capital, and a $50,000.00 loan, from B. Profits and losses were to be shared: A, 60%; B, 40%.

Although B had pledged $70,000.00 of capital, he actually invested only $50,000.00. It was mutually agreed that he was to be charged 10% interest on the amount of his deficiency of $20,000.00. This charge has not been placed on the books.

Required

1. Statement of income for the year ended December 31, 19__. The statement should be carefully constructed and adequately detailed. Is the net income, or net loss, of the statement of income one which has actually been *realized?* Explain why.

2. Balance sheet, December 31, 19__. The only accounts of partners to be placed in the balance sheet are their capital and loan accounts.

Problem 28–7. On December 31, 1958, the ledger of Robert L. Harder, a merchant, showed Taxes Expense with a balance of $16,512.00, and Taxes Payable, $10,400.00. These accounts were detailed as follows:

TAXES EXPENSE

1958		
Apr. 15	Income tax for 1957 (payment in full)	4,800.00
May 1	Property tax	6,312.00
Jan. to Dec.	Twelve sales tax remittances to State Treasurer	5,400.00

TAXES PAYABLE

1957		
Dec. 31	Estimated accrued property taxes for 8 months	4,000.00
	Sales tax for December 1957	400.00
	Provision (estimated) for 1957 income tax	6,000.00

The bookkeeper debited all disbursements for taxes of any kind to the Taxes Expense account. The disbursement on May 1, 1958, for $6,312.00 covered property taxes for the tax year, May 1, 1957, to April 30, 1958.

On May 1, 1957, the payment for property taxes was $6,000.00. The property tax bill for the year ending April 30, 1959, is estimated at $6,792.00.

Sales taxes collected, or debited to accounts receivable, were credited to the Sales account as a matter of bookkeeping convenience. The total sales tax collected from or debited to customers in any given month was remitted by Mr. Harder to the state treasurer by the 20th of the next succeeding month. Sales taxes of $450.00 for the month of December, 1958, were remitted to the state treasurer on January 15, 1959. The offsetting debit for the credit of $400.00 in the Taxes Payable account was the Sales account.

Because operations for 1958 had resulted in a small net loss, no income tax was expected to be payable for the year 1958.

Required

1. What should be the amount of Taxes Expense on the statement of income for 1958?
2. What entry or entries should be made to adjust the balances of the Taxes Expense and Taxes Payable accounts?

Chapter 29 THE BALANCE SHEET

Introduction

The statement of income is a statement which reports and explains the amount of net income earned by a business over a specified period of time. The balance sheet, on the other hand, is a statement which reports upon the financial condition (or position) of a business as of a specific date. The balance sheet incorporates, and significantly so, the results of past accounting transactions. It is a statement of financial condition produced by the transactions of an accounting period. It incorporates the statement of income as all, or part of, the explanation of the increase or decrease in the net worth of a business.

In summary it may be said that the balance sheet marks the end of a period of performance. It shows the effectiveness of this period of performance in terms of the financial results achieved: i.e., assets and equities are marshaled as to amount and kind and for appraisal of their relationships to each other.

The Content and Organization of the Balance Sheet

The balance sheet is a statement which shows the assets, liabilities, and net worth accounts of a business. If these accounts are properly classified, the balance sheet will emphasize certain major types of information. Detail may be included in a balance sheet in greater or less degree. Details may be shown in the balance sheet proper or in schedules supplementary to the balance sheet. The amount of detail to be included, and the manner of presenting it, is dependent upon the purpose of the balance sheet. For example:

For *management*, a master balance sheet supported by detailed schedules.

For *credit* purposes, a balance sheet detailed as to current assets and current liabilities but probably condensed in other respects.

For *stockholders* and *potential stockholders*, and for *bondholders* and

potential bondholders, a balance sheet with sufficient detail to permit adequate appraisals to be made of proprietary and bondholder interests. Balance sheets of banks, for example, usually contain a limited amount of detail whereas the balance sheets of investment trusts commonly show a detailed list of all securities owned (in supporting schedules).

For *long-term financing*, a balance sheet giving significant detail as to current values and also as to long-term values, i.e., fixed assets.

Whatever may be the purpose of a particular balance sheet, detail commensurate with that purpose should always be included.

The principal divisions of the balance sheet, in the order of their presentation in the statement proper, are the following:

Assets	*Liabilities and Capital*
Current Assets	Current Liabilities
Investments	Long-Term Liabilities
Fixed Assets	Capital Stock
Intangible Assets	Paid-in Surplus
	Retained Income

The ability of a company to pay its debts is of universal interest. The above order of accounts on the balance sheet conforms to that interest. Cash is first, with other assets following in the order of their expected convertibility into cash. On the liability side, the obligations which must be paid first are listed first, and those which are payable later are listed in the order of their probable liquidation.

This "current-to-fixed" order for presenting the accounts of a balance sheet is widely used. Sometimes the reverse order is employed but this is not common. The order of arrangement, in any case, should be logical and in harmony with the purpose of the balance sheet. The "current-to-fixed" order is usually to be preferred because, in the words of Robert H. Montgomery, "as long as the auditor has no practicable method of restricting the ultimate use of the balance sheet which he submits, he is forced to assume that in every case the balance sheet may be submitted to credit grantors."[1] This is an assumption which has general application.

A balance sheet should observe certain standards:

1. It should have a proper heading:

Name (of business)

Balance Sheet, _____ 19__

2. It should include all assets, liabilities, and proprietary claims. These assets and equities should be presented in the way which best ex-

[1] Robert H. Montgomery, *Auditing Theory and Practice* (5th ed.; New York: The Ronald Press Company), p. 79.

plains financial condition. A balance sheet should also include additional information covering such matters as, for example, lawsuits, contingent liabilities, valuation bases, and maturity dates of fixed liabilities. Information of this kind may be included as memoranda in the body of the balance sheet proper or, if more appropriate, it may appear in footnotes to the balance sheet.

3. It should be well organized and detailed (as appropriate). Assets and liabilities should be logically arranged and grouped, and a total shown for each group. Relationships between accounts and groups should be clearly apparent. On the liability side of the balance sheet, individual total should be shown for liability and proprietary accounts.

4. The valuations of the balance sheet should be fair—in accord with accepted principles of accounting consistently applied. The basis of valuation, if other than cost, should be disclosed.

5. It should exhibit uniformity as to

a) layout,
b) terminology,
c) the content matter of each account and group, and
d) date, when it is desired to make comparisons over several periods.

It is preferable to compare a December 31 balance sheet with a previous December 31 balance sheet, and so on.

Accounts Not Easily Classified

CASH IN SINKING FUND If a sinking fund is subject to the control of the depositing company, it is a current asset. If it is not subject to the control of the company, it should follow the current asset group as a separate classification.

ACCOUNTS RECEIVABLE: OFFICERS AND EMPLOYEES Because of the special character of these debts, accounts receivable with officers and employees should appear as a separate item on the balance sheet. If the accounts are collectible within one year, they are current assets.

ACCOUNTS RECEIVABLE: CREDIT BALANCES Credit balances in customers' accounts are subject to payment in cash and therefore should be classified as current liabilities in the balance sheet.

ACCOUNTS PAYABLE: DEBIT BALANCES Debit balances in creditors' accounts are subject to current collection in cash. They can also be used to reduce future current liabilities to these creditors. On the balance sheet, therefore, these debit balances should be classified as current assets.

DEFERRED EXPENSES In its broad concept, deferred expenses are those expenditures whose costs are partially an expense of a current accounting period and partially an expense of future accounting periods. In this broad sense even depreciable fixed assets are deferred expenses.

In a narrower concept, deferred expenses are divisible into (1) prepaid expenses and (2) deferred charges. Prepaid expenses are assets; they are costs representing unconsumed expense-commodities or services receivable —costs which are to be written off to expense as the commodities or services are consumed in the production of income. Deferred charges are expenditures which will be written off against the revenues of two or more accounting periods, often on a more or less arbitrary basis. Examples of deferred charges are certain experimental costs whose worth is still to be determined; heavy promotional expenses incurred in launching a new product; costs of rearranging the layout of a factory; and moving expenses incurred in moving a business from one location to another.

The balance sheet should clearly distinguish between prepaid expenses and deferred charges. With respect to their classification, prepaid expenses should be classified as current assets if these expenses represent advance applications of cash—disbursements which would otherwise have to be made in the next accounting period—and if they are expected to be consumed in the production of income with the next twelve months (or operating cycle of a business). True prepaid expenses are as much a part of the working capital of a business as are inventories.

Deferred charges, if any, should be shown as a final group of values on the asset side of the balance sheet. As a matter of fact, deferred charges (narrowly defined) are not assets at all. However, they are sometimes admitted to the balance sheet of a business because of management's unwillingness, for one reason or another, to write off these values as current charges against income.

INVESTMENTS IN STOCKS AND BONDS If securities are intended to be sold within one year, or if they are held for working capital purposes, the securities should be classified as current assets. On the other hand, if the securities are held primarily for long-term *investment* purposes, they should be classified in the balance sheet as noncurrent *investments*. In other words, unless the nature and purpose of an investment identify it as part of the working capital of a business, the investment should *not* be classified as a current asset. It should follow the current asset group under the title of Investments and, where circumstances make it advisable to do so, the securities should be subdivided into investments which are liquid and those which are not.

It is important that the stock and bond investments of a business be classified properly on the balance sheet. An improper classification of

securities will cause the working capital position of the business to be shown improperly.

SINKING FUND A contractual sinking fund under the control of a trustee is an asset to the depositing corporation. On the balance sheet this asset should follow the current asset group as a separate classification.

If, however, the trustee of a sinking fund has used all, or part of, the assets of the fund to acquire bonds of the issue for which he is trustee, the bonds acquired are reductions of the liability represented by the Bonds Payable account. The practical effect of the trustee's acquisition of bonds of issue is to reduce the corporation's bonded indebtedness to the outside world.

DEFERRED INCOMES As a matter of custom, deferred incomes are commonly shown on the balance sheet as a separate class of liability. However, deferred incomes are properly includible with the current liabilities of a balance sheet. There is no doubt that unearned income which, to become earned income, will require the use of current assets is a current liability. Unfilled subscriptions to the *Saturday Evening Post* are an example of deferred income which is properly classified as a current liability by The Curtis Publishing Company. Unredeemed tickets for transportation are another example of deferred income which is an undisputed current liability.

It is also proper for deferred incomes, which require only the passage of time to become earned income, to be classed as a current liability. Rent collected in advance is an example. This liability will be liquidated by the process of making available for tenant occupancy the premises specified in the contract of rental. Such availability involves consumption of current assets for purposes of insurance, taxes, and other costs of ownership. Deferred rent income is an obvious component of working capital.

Deferred interest income is a current liability only if it represents interest *collected* in advance. When cash is loaned and a note receivable accepted, the deferred interest income (if any) on transactions of this kind is a valuation account and should be deducted from notes receivable on the balance sheet. Where large values are involved, as they are for banks and finance and insurance companies, this is preferred accounting. Where small values are involved, the theory also applies; however, if the values are not significant, tolerance is warranted if the notes receivable of a business are shown as a current asset and the nominal amount of deferred interest income is shown as a current liability.

MISCELLANEOUS Other accounts often improperly classified on the balance sheet of a business are organization expenses; depreciation, depletion, and other valuation accounts; bond premium and bond discount; stock premium and stock discount; treasury stock and treasury bonds.

The balance sheet aspects of these accounts have been discussed in earlier chapters of this book.

Circumstances are sometimes material to the classification of some accounts on the balance sheet. For instance, an automobile is a fixed asset for most businesses; to automobile dealers, however, automobiles are merchandise inventory and current assets. Real estate employed in a manufacturing business is a fixed asset, whereas for a business whose major activity is the purchase and sale of real estate, the realty is the substantial equivalent of stock in trade, noncurrent in nature. It follows, therefore, that a proper understanding of the nature and purpose of an account is a necessary prerequisite to the proper classification of the account on the balance sheet.

Comparative Balance Sheets

Balance sheet analysis, like income statement analysis, is often productive of significant information, and especially so if several consecutive balance sheets are compared. The following example is a two-year comparative balance sheet of the Manchester Manufacturing Company:

Manchester Manufacturing Company

COMPARATIVE BALANCE SHEETS FOR DECEMBER 31, 1958 AND 1957

ASSETS

	1958	*%*	*1957*	*%*	*+ Increase − Decrease*
Current Assets:					
Cash	$ 102,000.00	7.82	$ 60,000.00	4.67	+$ 42,000.00
Accounts Receivable	100,000.00	7.67	130,000.00	10.12	− 30,000.00
Finished Goods	85,000.00	6.52	120,000.00	9.35	− 35,000.00
Work in Process	50,000.00	3.83	40,000.00	3.12	+ 10,000.00
Raw Materials	15,000.00	1.15	20,000.00	1.56	− 5,000.00
Total Current Assets	$ 352,000.00	26.99	$ 370,000.00	28.82	−$ 18,000.00
Investments:					
Government Bonds			$ 100,000.00	7.78	−$100,000.00
Corporate Stocks and Bonds	$ 200,000.00	15.34			+ 200,000.00
Total Investments	$ 200,000.00	15.34	$ 100,000.00	7.78	+$100,000.00
Fixed Assets:					
Buildings	$ 300,000.00		$ 300,000.00		
Allowance for Depreciation	37,500.00		30,000.00		
	$ 262,500.00	20.13	$ 270,000.00	21.03	−$ 7,500.00
Delivery Equipment	$ 30,000.00		$ 30,000.00		
Allowance for Depreciation	17,500.00		10,000.00		
	$ 12,500.00	.96	$ 20,000.00	1.56	− 7,500.00
Factory Equipment	$ 510,000.00		$ 500,000.00		
Allowance for Depreciation	171,000.00		120,000.00		
	$ 339,000.00	26.00	$ 380,000.00	29.59	− 41,000.00
Office Equipment	$ 60,000.00		$ 60,000.00		
Allowance for Depreciation	22,000.00		16,000.00		
	$ 38,000.00	2.91	$ 44,000.00	3.43	− 6,000.00
Land	$ 100,000.00	7.67	$ 100,000.00	7.79	
TOTAL FIXED ASSETS	$ 752,000.00	57.67	$ 814,000.00	63.40	−$ 62,000.00
	$1,304,000.00	100.00	$1,284,000.00	100.00	+$ 20,000.00

LIABILITIES AND CAPITAL

	1958	%	*1957*	%	+ *Increase* − *Decrease*
Current Liabilities:					
Vouchers Payable	$ 80,000.00	6.14	$ 147,000.00	11.45	−$ 67,000.00
Income Taxes Payable	20,000.00	1.53	10,000.00	0.78	+ 10,000.00
Dividends Payable			10,000.00	0.78	− 10,000.00
	$ 100,000.00	7.67	$ 167,000.00	13.01	−$ 67,000.00
Capital:					
Common Stock, $100.00 par	$1,000,000.00	76.69	$ 900,000.00	70.09	+$100,000.00
Retained Income	204,000.00	15.64	217,000.00	16.90	− 13,000.00
	$1,204,000.00	92.33	$1,117,000.00	86.99	+$ 87,000.00
	$1,304,000.00	100.00	$1,284,000.00	100.00	+$ 20,000.00

In addition to the analysis above, each balance sheet group may be further analyzed, thus:

	1958	%	*1957*	%
Current Assets:				
Cash	$102,000.00	28.98	$ 60,000.00	16.22
Accounts Receivable	100,000.00	28.41	130,000.00	35.13
Finished Goods	85,000.00	24.15	120,000.00	32.44
Work in Process	50,000.00	14.20	40,000.00	10.81
Raw Materials	15,000.00	4.26	20,000.00	5.40
TOTAL	$352,000.00	100.00	$370,000.00	100.00

Ratios

The comparative balance sheet of the Manchester Manufacturing Company permits certain obvious comparisons of 1958 percentages with those of 1957. In addition to these comparisons, there are certain others which are important enough to warrant special attention. Some of these use balance sheet data only, and some use data from both the balance sheet and the statement of income. Some of the more common of these other comparisons are discussed and illustrated below. The figures which are used are taken from the financial statements of the Manchester Manufacturing Company.

Current Ratio

This ratio occupies high rank as a test of current condition. Credit analysts usually feel that a company should have $2 of current assets for each $1 of current liabilities. A 2 to 1 ratio, however, should not be considered a fixed standard. A satisfactory current ratio for one company may not be a satisfactory current ratio for another. A 2 to 1 ratio for a company in the restaurant business would generally indicate good financial condition whereas a 2 to 1 ratio for a retail furniture company (selling on the installment plan of payment) would ordinarily indicate poor current financial

condition. A satisfactory current ratio in the installment furniture business would be about 4½ to 1. This high ratio is required because of the large amount of capital invested in noncash current assets, especially accounts receivable and inventories, and because a considerable period of time is necessary to convert inventories into cash.

The standard for a current ratio, in any given case, is therefore dependent upon the rapidity with which noncash current assets can be expected to be converted into cash. If the turnover (i.e., conversion) is slow, the standard for the current ratio is high. If the turnover is high, the standard is low. The desirable current ratio will naturally vary from industry to industry.

The current ratio is computed as follows:

$$\frac{\text{Current assets}}{\text{Current liabilities}} = \begin{cases} 1957 = \dfrac{370{,}000.00}{167{,}000.00} = 2.22 \\ 1958 = \dfrac{352{,}000.00}{100{,}000.00} = 3.52 \end{cases}$$

Should current assets in general, and merchandise inventory in particular, increase over a specified period of time, the usual result would be a reduction in the current ratio. The current ratio would be reduced because an increase in the inventory and receivables of a business is usually (but not always, however) accompanied by an increase in the amount of its current liabilities. Contrariwise, should current assets in general, and merchandise inventory in particular, decrease over a specified period of time, the usual result would be an increase in the current ratio. The current ratio would be increased because a decrease in the inventory and receivables of a business is usually accompanied by a decrease in current liabilities. As these assets are converted into cash, the cash received is used to reduce current liabilities, thus causing an immediate improvement in the current ratio.

These ratios were obtained by using the items which constitute working capital, i.e., current assets and current liabilities. Current assets are cash, and other assets which, within the next twelve months or operating cycle of normal business operations, are intended to be (a) converted into cash or (b) used up in the production of income." This definition emphasizes the fact that current assets are acquired with the primary purpose and intention of near-term conversion into cash. More broadly it shows that current assets involve tests for purpose, intention, convertibility into cash, or their utilization for income-producing purposes.

Acid Test Ratio

The significance of the current ratio is dependent upon the liquidity of its components. If accounts receivable have increased because collec-

tions have slowed down, if accounts receivable have increasingly been converted into notes receivable instead of being collected, and if the inventory is of such nature that the rate of its conversion into cash is slow, then the result of all this is a current ratio with certain unwelcome implications. This is true even though the current ratio is a high one, and "improved" over earlier ratios.

If a company has $300,000.00 in current assets and $100,000.00 in current liabilities, the current ratio is 3 to 1 and apparently favorable. But if inventory represents $250,000.00 of the current assets, and six months or more are required to convert the inventory into the cash, the company in reality has but $50,000.00 of funds available for the payment of $100,000.00 of current liabilities. The original estimate of the ability of the company to pay its current debts must therefore be significantly revised.

The "acid test" ratio of a company's current position is a ratio which relates only cash and its immediate equivalent to the current liabilities, thus:

$$\frac{\text{Cash + Receivables + Marketable securities}}{\text{Current liabilities}} = \begin{cases} 1957 = \dfrac{290{,}000.00}{167{,}000.00} = 1.74 \\ 1958 = \dfrac{402{,}000.00}{100{,}000.00} = 4.02 \end{cases}$$

A 1 to 1 ratio is generally considered favorable.

Ratio of Accounts Receivable to Net Sales

To test the efficacy of a company's collection policy, the following ratio may be employed:

$$\frac{\text{Accounts receivable}}{\text{Net sales}} = \begin{cases} 1957 = \dfrac{130{,}000.00}{560{,}000.00} = 23.21\,\% \\ 1958 = \dfrac{100{,}000.00}{600{,}000.00} = 16.67\,\% \end{cases}$$

Net sales is used as the denominator provided the ratio of credit sales to total sales is relatively constant.

These percentages can be converted into the average number of days' sales uncollected:

1957 = 23.21 % of 365 (days in year) = 84.7 days
1958 = 16.67 % of 365 (days in year) = 60.8 days

These days also represent, approximately, the average collection period for accounts receivable, provided the figures for trade debtors for 1957 and 1958 represent the average amount of accounts receivable out-

standing for those years. Greater accuracy will be obtained in these day-figures if accounts receivable are related to credit sales.

Ratio of Accounts Payable to Net Purchases

This ratio is applicable to a trading concern. It is designed to test the manner in which a business takes care of its own trade obligations for merchandise. The ratio gives the percentage of the net merchandise purchases which are unpaid at the end of the accounting period, thus:

$$\frac{\text{Accounts payable for merchandise}}{\text{Net merchandise purchases}} = \%$$

This percentage may be converted into days as in the preceding section.

When notes payable represent merchandise obligations, the amount of outstanding notes payable should be added to the numerator of the above fraction for greater accuracy in the final percentage.

To ascertain if a company is taking its purchases discounts, the following calculation may be made:

Merchandise accounts payable, January 1, 19__	$xxx xx
Add Merchandise purchases in 19__	xxx xx
	$xxx xx
Less Merchandise accounts payable, December 31, 19__	xxx xx
Accounts payable paid in 19__	$xxx xx
Average purchase discount rate	%
Purchases discounts available in 19__	$xxx xx
Purchases discounts taken in 19__	xxx xx

Merchandise Turnover

The control of inventory is one of the important problems of the management of a business. The inventory should be large enough to meet satisfactorily the demands of customers for goods. On the other hand, the inventory should not be too large. This is important in order to minimize the cost of depreciation and obsolescence in inventory, to minimize the cost of high markdowns often attendant upon a slow movement of inventory into sales, and to avoid tying up too much capital in inventory.

One ratio for testing the efficiency of the sales and purchasing operations of a business is the ratio for merchandise turnover.

Merchandise turnover is a ratio which shows how many times a year the merchandise inventory of a business has been converted into sales. Each turnover of merchandise inventory represents the earning of one gross profit. As turnovers increase in number, it is normally to be expected that there will be an increase in the total gross profit earned by a business and in the rate of return on the capital invested in inventory. Normally, therefore, an increasing rate of merchandise turnover is favorably regarded.

A business which requires an inventory of $50,000.00 to support an annual sales volume of $100,000.00 is relatively more profitable and better managed than one which, in the same line of business, requires an inventory of $100,000.00 to support the same volume of sales.

The ratio for merchandise turnover is computed as follows:

$$\frac{\text{Cost of sales}}{\text{Average inventory of finished goods}} = \begin{cases} 1957 = \dfrac{353{,}000.00}{(130{,}000.00 + 120{,}000.00) \div 2} = 2.82 \\ 1958 = \dfrac{365{,}000.00}{(120{,}000.00 + 85{,}000.00) \div 2} = 3.56 \end{cases}$$

The converse of the above ratios, when multiplied by 365, shows that the inventory of finished goods on December 31, 1958, was equivalent to 129 days' sales as compared with 102 days' sales for the inventory of finished goods on December 31, 1957.

In lieu of the ratio of merchandise turnover, a rough measure of the merchandising efficiency of a business is afforded by comparing sales with the value of the average amount of inventory. The ratio of sales to inventory, however, is a very rough test. Among other things, the numerator of the ratio is stated at selling price (cost + gross profit), whereas the average inventory is stated at cost. The ratio of sales to inventory may be used as a substitute for the ratio of cost of sales to inventory when the figure for cost of sales is not available. When so used, however, the ratio should be regarded as only a rough approximation.

Working Capital

Closely akin to the current ratio are the computations for working capital and working capital turnover. Working capital is the excess of current assets over current liabilities. Adequate working capital is a well-recognized requisite for business success: but "adequate" working capital, like the current ratio, varies among businesses and industries. A baking corporation with a sales volume of $1,000,000.00 per year, and all on a cash basis, would require a relatively small amount of working capital. A retail furniture store, on the other hand, with a sales volume of $1,000,000.00, and liberal terms of credit, would require a relatively large amount of working capital.

The following ratio is one test of the productivity of working capital:

$$\frac{\text{Sales}}{\text{Average working capital}} = \begin{cases} 1957 = \dfrac{560{,}000.00}{(217{,}000.00 + 203{,}000.00) \div 2} = 2.67 \\ 1958 = \dfrac{600{,}000.00}{(203{,}000.00 + 252{,}000.00) \div 2} = 2.64 \end{cases}$$

An increasing amount of sales per dollar of working capital indicates a more intensive use of capital. A business which has a sales volume of

$1,000,000.00 per year on a working capital of $250,000.00 is, obviously, a better managed business than a similar one which requires $500,000.00 of working capital to support the same sales volume.

There is some difference between a business which has current assets of $100,000.00 and current liabilities of $98,000.00, or working capital of $2,000.00, and another business (of like kind) which has current assets of $10,000.00 and current liabilities of $8,000.00, and also working capital of $2,000.00. A working capital *balance* therefore does not always tell the whole story. Further, a *turnover* of working capital, as computed above, may sometimes be suspect because a lack of working capital may sometimes make the turnover ratio look surprisingly good. Some analysts, accordingly, feel that the ratio for measuring the productivity of working capital will be more meaningful if it is altered to mean "sales divided by average gross current assets."

A decrease in working capital is not necessarily to be interpreted unfavorably. If the decrease is due to reduction of long-term indebtedness or to the transfer of funds to more profitable employment, the decrease is understandable. Increases or decreases in the amount of working capital require, in all cases, careful interpretation before conclusions are drawn. Indeed, the maintenance or increase of net working capital from one year to another may be regarded as a rough and ready test of the validity of the value for net income on the statement of income.

Ratio of Fixed Assets to Total Assets

This ratio is computed as follows:

$$\frac{\text{Fixed assets}}{\text{Total assets}} = \begin{cases} 1957 = \dfrac{814{,}000.00}{1{,}284{,}000.00} = 63.40\% \\ 1958 = \dfrac{752{,}000.00}{1{,}304{,}000.00} = 57.67\% \end{cases}$$

This ratio is intended to show what part of the total assets employed in a business is represented by fixed assets. At times an increasing ratio of fixed assets to total assets may signify an unfavorable tendency to overinvestment in fixed assets. To ascertain whether or not fixed assets are maintaining their former rate of productivity, net operating profit or net sales should be related to fixed assets, and comparisons of these relationships made for two or more years.

Ratio of Sales to Fixed Assets

The productivity of fixed assets in terms of sales may be tested by comparing sales to fixed assets as, for example:

$$\frac{\text{Net sales}}{\text{Fixed assets}} = \begin{cases} 1957 = \dfrac{560{,}000.00}{814{,}000.00} = 68.80\% \\ 1958 = \dfrac{600{,}000.00}{752{,}000.00} = 79.05\% \end{cases}$$

These percentages mean that for each dollar invested in fixed assets in 1957 the dollar volume of sales was $0.6880; in 1958 the dollar volume rose to $0.7905.

The ratio of sales to fixed assets is often useful in testing the productivity of an increasing investment in fixed assets, i.e., by testing whether or not an increased investment in fixed assets has been compensated for by a worth-while increase in the volume of sales.

Some analysts supplement the ratio of sales to fixed assets with another one—the ratio of net operating profit to fixed assets.

Net Worth Ratio

This ratio is computed as follows:

$$\frac{\text{Net worth}}{\text{Total assets}} = \begin{cases} 1957 = \dfrac{1{,}117{,}000.00}{1{,}284{,}000.00} = 86.99\% \\ 1958 = \dfrac{1{,}204{,}000.00}{1{,}304{,}000.00} = 92.33\% \end{cases}$$

An increase in this ratio over several years is an indication of a strengthening proprietary interest. A decreasing ratio signifies that creditors are contributing a larger proportion of the funds used in the business. An increasing amount of debt may well be construed unfavorably, especially if the amount of debt continues to increase significantly over a considerable period of time. The justification for an increased amount of debt is the realization of an increased amount of net income, an increase which should be more than the costs of the debt.

The desired ratio of debt to proprietorship will naturally vary in different industries.

Ratio of Net Income to Net Worth

This ratio measures the rate of return on invested capital. It is therefore an important ratio. It is computed as follows:

$$\frac{\text{Net income}}{\text{Net worth at beginning of income period}} = \begin{cases} 1957 = \dfrac{43{,}500.00}{1{,}038{,}000.00} = 4.19\% \\ 1958 = \dfrac{60{,}000.00}{1{,}117{,}000.00} = 5.13\% \end{cases}$$

If greater accuracy is required, the denominator of this ratio should be the average amount of capital invested in the period over which the net income was earned.

The importance of the rate of earnings being maintained or of showing an upward trend should be evident.

Net Income per Share

The net income per share of common stock may be analyzed somewhat interestingly as follows:

	1958		1957	
	Total	*Per Share*	*Total*	*Per Share*
Sales	$600,000.00	$60.00	$560,000.00	$62.22
Cost of Sales	365,000.00	36.50	353,000.00	39.22
Gross Profit	$235,000.00	$23.50	$207,000.00	$23.00
Operating Expenses	167,000.00	16.70	158,500.00	17.61
Net Profit from Operations	$ 68,000.00	$ 6.80	$ 48,500.00	$ 5.39
Other Income	12,000.00	1.20	5,000.00	0.55
	$ 80,000.00	$ 8.00	$ 53,500.00	$ 5.94
Provision for Income Taxes	20,000.00	2.00	$ 10,000.00	1.11
Net Income	$ 60,000.00	$ 6.00	$ 43,500.00	$ 4.83

Book Value per Share

The book value per share of common stock may be analyzed in a somewhat similar manner, thus:

	1958		1957	
	Total	*Per Share*	*Total*	*Per Share*
Current Assets	$ 352,000.00		$ 370,000.00	
Current Liabilities	100,000.00		167,000.00	
	$ 252,000.00	$ 25.20	$ 203,000.00	$ 22.56
Investments	200,000.00	20.00	100,000.00	11.11
Fixed Assets	752,000.00	75.20	814,000.00	90.44
	$1,204,000.00	$120.40	$1,117,000.00	$124.11
Less Long-Term Debt	0.00	0.00	0.00	0.00
Net Assets	$1,204,000.00	$120.40	$1,117,000.00	$124.11

Ratios: Their Further Consideration

The ratios discussed in the preceding pages do not, by any means, represent all of the ratios available to the analyst of business. The ratios which have been illustrated are, however, among the most important. A description of other ratios may be found in standard texts on business finance and advanced accounting; and also in the *Accountants' Handbook*,[2]

[2] Rufus Wixon, *Accountants' Handbook* (New York: The Ronald Press Company, 1956).

in the *Financial Handbook*,[3] and in *Practical Financial Statement Analysis*.[4]

Financial analysis, it should be pointed out, is not a matter of routine procedure. Ratios, averages, and values have worth when they are used intelligently and when they rest on generally accepted principles of accounting. Discrimination and standards are necessary. Due recognition should also be given to other factors which affect accounting results, such as, for instance, the following:

Efficiency, progressiveness, and *honesty* in management
General business conditions and business conditions within an industry
Stage of the business cycle
Growth curves of industry and company
Factors peculiar to the company being analyzed

The moral hazard may be included in the last-named. The importance of managerial integrity to the accounting values of a business should be self-evident. It is to be observed, however, that sometimes it is possible for the influence of a steadily worsening financial condition not only to erode the moral stamina of the management of a business but to break down its character completely.

In financial analysis, there is no substitute for sound judgment. And sound judgment in financial analysis, as in any other kind of analysis, depends upon the assembly and able appraisal of all factors which have a bearing upon the problem at hand.

The Manchester Manufacturing Company

It is now in order to continue the analysis of the Manchester Manufacturing Company which was begun on page 602. The following is a summary of further information with respect to the financial affairs of the company for the years 1958 and 1957:

Current assets with which to meet each dollar of current liabilities have increased from	$2.22 to $3.52
Cash, and its immediate equivalent, when related to each dollar of current liabilities, has increased from	$1.74 to $4.02
Cash alone has increased from . . . . . which, in itself, is more than enough to pay all of the current liabilities on December 31, 1950, of $100,000.00.	$60,000.00 to $102,000.00

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[3] Jules I. Bogen, *Financial Handbook* (New York: The Ronald Press Company, 1949).

[4] Roy A. Foulke, *Practical Financial Statement Analysis* (New York: McGraw-Hill Book Company, Inc., 1953).

Accounts receivable have decreased from	$130,000.00 to $100,000.00
a decrease (in terms of sales) of	23.21% to 16.67%.
This decrease reflects the improved collections of the year, the average time necessary to collect accounts being reduced from	84.7 days to 60.8 days.
Finished goods inventory decreased from	$120,000.00 to $85,000.00
a decrease of	$35,000.00 or 29.17%,
although sales increased	$40,000.00, or 7.14%.
This reflects the improvement in merchandise turnover from	2.82 to 3.56
Working capital has increased from	$203,000.00 to $252,000.00
an increase of	$49,000.00, or 24.14%,
and concomitant with an increase in the investment in marketable securities from	$100,000.00 to $200,000.00.
The productivity of working capital has been maintained at a rate almost identical with that of 1957, working capital turnover declining negligibly from	2.67 to 2.64.
Fixed assets have declined from	$814,000.00 to $752,000.00
a decrease of	$62,000.00 or 7.62%,
although sales increased	$40,000.00 or 7.14%.
In terms of sales, the productivity of each dollar invested in fixed assets increased from	$0.6880 to $0.7905
Related to total assets, fixed assets have declined from	63.40% to 57.67%.

Fixed assets, further,

1. Appear to be in the right proportion to each other, and to total assets;
2. Exhibit no tendency toward overinvestment;
3. appear to have adequate depreciation reserves; and
4. offer no financial problem of replacement. The company has $200,000.00 in corporate stocks and bonds, readily marketable, and which are not included in working capital. On the other hand, no significant capital expenditures appear to be required for 1959.

All values are tangible values.

The liabilities of the company have been reduced from of all assets employed in the business. Creditors therefore have a smaller interest in the company.	13.01% to 7.67%
Net worth has increased from	$1,117,000.90 to $1,204,000.00,
although the book value of each share of common stock has decreased from	$124.11 to $120.40.
This decrease is due to the sale of $100,000.00 of capital stock at par.	
The rate of return on capital, as measured by net income, increased from	4.19% to 5.13%.

Statement of Source and Application of Funds

The changes which have occurred in the balances of the accounts of the 1958 balance sheet of the Manchester Manufacturing Company—as

compared with 1957—are given in the Increase-Decrease column of the statement showing comparative balance sheets, December 31, 1958, and December 31, 1957. If these changes are properly analyzed and classified, an interesting and useful summary of the flow of funds within the business for 1958 may be had. This summary is usually called a "statement of source and application of funds" and, as the name implies, shows

1. the sources from which new funds were obtained, and
2. the uses to which these funds were put.

The term "funds" is generally defined as being working capital. The statement of source and application of funds is therefore a statement which describes the inflow and outflow of the working capital of a business for a given accounting period.

There are several sources from which a business may obtain its funds. Funds may be received

1. as the proceeds of sales of assets,
2. as the proceeds of sales of capital stock,
3. through the channel of increases in liabilities, or
4. through the channel of earned income.

The funds of a business may be expended

1. to purchase additional assets,
2. to reduce liabilities,
3. To reduce net worth (to pay dividends or buy treasury stock, for example), or
4. because of losses incurred.

From the standpoint of the comparative balance sheet, and the application-of-funds work sheet (pages 642–643), the excess of debits over credits in an account for an accounting period represents an application of funds, whereas an excess of credits over debits represents a source of funds.

The values of the Increase-Decrease column of the comparative balance sheet, page 629 (and the second pair of columns of the work sheet on page 642) may be gathered together and a summary prepared to show that the Manchester Manufacturing Company, in 1958,

obtained funds from the following sources:

1. Sale of government bonds	$100,000.00
2. Sale of common stock	100,000.00
3. Reduction of fixed assets	62,000.00
	$262,000.00

and

applied funds to the following purposes:

1. To purchase corporate stocks and bonds	$200,000.00	
2. To reduce Retained Income	13,000.00	213,000.00
and increased its working capital by		$ 49,000.00

This summary is a simple statement of source and application of funds. It is an interesting statement if only from the standpoint that it shows that the management of the Manchester Manufacturing Company actually received funds in far larger amount than indicated by the net income of $60,000.00 on the statement of income for 1958. The summary also tells what disposition was made of the new funds received by the business in 1958.

The foregoing summary, however, is not accurate. Certain corrections are necessary for two reasons:

1. The reduction of fixed assets by $62,000.00 really represents

Funds received through the channel of operating revenues to compensate for the capital consumed because of depreciation expense	$72,000.00
Less Purchase of factory equipment	10,000.00
	$62,000.00

2. The reduction of Retained Income by $13,000.00 represents

Dividends declared in 1958	$73,000.00
Less Net income for 1958	60,000.00
	$13,000.00

In turn, the values of $72,000.00, $10,000.00, $73,000.00, and $60,000.00 mean that

new funds were received through the channel of earned income:

Net income for 1958	$ 60,000.00
Add Charges against income not representing an expenditure of funds:	
Depreciation Expense	72,000.00
	$132,000.00

and that funds were expended

To purchase factory equipment	$10,000.00	
To pay dividends	73,000.00	83,000.00
Leaving funds to increase the working capital of the business by		$ 49,000.00

By incorporating this information, the summary on page 640 can be revised to show that the Manchester Manufacturing Company, in 1958,

obtained funds from the following sources:

1. Sale of government bonds	$100,000.00
2. Sale of common stock	100,000.00
3. Operations of the business	132,000.00
	$332,000.00

and

applied funds to the following purposes:

1. To purchase corporate stocks and bonds	$200,000.00	
2. To purchase factory equipment	10,000.00	
3. To pay dividends	73,000.00	283,000.00
and increased its working capital by		$ 49,000.00

Manchester Manu

APPLICATION OF FUNDS WORK

	BALANCE SHEET *December 31*		YEAR'S EXCESS	
	1958	*1957*	*Debits*	*Credits*
Cash	102,000.00	60,000.00	42,000.00	
Accounts Receivable	100,000.00	130,000.00		30,000.00
Finished Goods	85,000.00	120,000.00		35,000.00
Work in Process	50,000.00	40,000.00	10,000.00	
Raw Materials	15,000.00	20,000.00		5,000.00
Government Bonds		100,000.00		100,000.00
Corporate Stocks and Bonds	200,000.00		200,000.00	
Building	300,000.00	300,000.00		
Delivery Equipment	30,000.00	30,000.00		
Factory Equipment	510,000.00	500,000.00	10,000.00	
Office Equipment	60,000.00	60,000.00		
Land	100,000.00	100,000.00		
	1,552,000.00	1,460,000.00		
Vouchers Payable	80,000.00	147,000.00	67,000.00	
Income Taxes Payable	20,000.00	10,000.00		10,000.00
Dividends Payable		10,000.00	10,000.00	
Allec. for Deprec.—Building	37,500.00	30,000.00		7,500.00
Allec. for Deprec.—Delivery Equipment	17,500.00	10,000.00		7,500.00
Allec. for Deprec.—Factory Equipment	171,000.00	120,000.00		51,000.00
Allec. for Deprec.—Office Equipment	22,000.00	16,000.00		6,000.00
Common Stock	1,000,000.00	900,000.00		100,000.00
Retained Income	204,000.00	217,000.00	13,000.00	
	1,552,000.00	1,460,000.00		
Net Income for 1958				
Noncash charges to Profit and Loss:				
Depreciation Expense—Building				
Depreciation Expense—Delivery Equipment				
Depreciation Expense—Factory Equipment				
Depreciation Expense—Office Equipment				
Payment of dividends				
Increase of working capital				
			352,000.00	352,000.00

facturing Company

SHEET, DECEMBER 31, 1958

ADJUSTMENTS		WORKING CAPITAL		FUNDS	
Debit	*Credit*	*Increase*	*Decrease*	*Applied*	*Provided*
		42,000.00			
			30,000.00		
			35,000.00		
		10,000.00			
			5,000.00		
					100,000.00
				200,000.00	
				10,000.00	
		67,000.00			
			10,000.00		
		10,000.00			
(D) 7,500.00					
(E) 7,500.00					
(F) 51,000.00					
(G) 6,000.00					
					100,000.00
(A) 60,000.00	(B) 73,000.00				
	(A) 60,000.00				60,000.00
	(D) 7,500.00				7,500.00
	(E) 7,500.00				7,500.00
	(F) 51,000.00				51,000.00
	(G) 6,000.00				6,000.00
(B) 73,000.00				73,000.00	
			49,000.00	49,000.00	
205,000.00	205,000.00	129,000.00	129,000.00	332,000.00	332,000.00

This revised summary may be recast so as to constitute a formal statement of funds. A statement of this kind, prepared from the work sheet on page 642, would be as follows:

Manchester Manufacturing Company

STATEMENT OF SOURCE AND APPLICATION OF FUNDS
YEAR ENDED DECEMBER 31, 1958

Funds Were Provided by			
The sale of government bonds for			$100,000.00
The sale of common stock for			100,000.00
Operations of the business:			
Net income as per statement of income		$ 60,000.00	
Add Noncash Charges to Profit and Loss:			
Depreciation Expense—Building	$ 7,500.00		
Depreciation Expense—Delivery Equipment	7,500.00		
Depreciation Expense—Factory Equipment	51,000.00		
Depreciation Expense—Office Equipment	6,000.00	72,000.00	132,000.00
			$332,000.00
Funds Were Applied to			
The purchase of corporate stocks and bonds		$200,000.00	
The purchase of factory equipment		10,000.00	
The payment of dividends		73,000.00	283,000.00
Increase in Working Capital (Schedule 1)			$ 49,000.00

Schedule #1

Manchester Manufacturing Company

SCHEDULE OF WORKING CAPITAL
DECEMBER 31, 1958, AND DECEMBER 31, 1957

	DECEMBER 31		WORKING CAPITAL	
	1958	*1957*	*Increase*	*Decrease*
Cash	$102,000.00	$ 60,000.00	$ 42,000.00	
Accounts Receivable	100,000.00	130,000.00		$ 30,000.00
Finished Goods	85,000.00	120,000.00		35,000.00
Work in Process	50,000.00	40,000.00	10,000.00	
Raw Materials	15,000.00	20,000.00		5,000.00
Total Current Assets	$352,000.00	$370,000.00		
Vouchers Payable	$ 80,000.00	$147,000.00	67,000.00	
Income Taxes Payable	20,000.00	10,000.00		10,000.00
Dividends Payable		10,000.00	10,000.00	
Total Current Liabilities	$100,000.00	$167,000.00		
Working capital	$252,000.00	$203,000.00		
Increase in working capital				49,000.00
			$129,000.00	$129,000.00

Because it provides a condensed description of the flow of funds within a business, the statement of source and application of funds is a valuable adjunct to the balance sheet and the statement of income. The statement of source and application of funds is a regular part of the annual reports of many corporations, among them being the Caterpillar Tractor Company, the Consolidated Gas Company of New York, Standard Brands Incorporated, the Greyhound Corporation, and the United States Steel Corporation.

The development of the statement of source and application of funds in its more complex accounting situations is discussed in the author's *Intermediate Accounting.*

PROBLEMS

Problem 29–1. The condensed financial statements of the Hobart Corporation for 19__ were

Statement of Income

Sales	$200,000.00
Cost of Sales	120,000.00
Gross Profit	$ 80,000.00
Expenses	40,000.00
Net Profit from Operations	$ 40,000.00
Income Taxes	20,000.00
Net Income	$ 20,000.00

Balance Sheet

Cash	$ 60,000.00
Accounts Receivable	30,000.00
Inventory	80,000.00
Plant and Property	100,000.00
Allowance for Depreciation	(30,000.00)
	$240,000.00
Accounts Payable	$ 20,000.00
Income Taxes Payable	10,000.00
6% Preferred Stock, $100.00 par	50,000.00
Common Stock, $100.00 par	100,000.00
Retained Income	40,000.00
Reserve for Contingencies	20,000.00
	$240,000.00

Required

1. Current ratio.
2. Amount of net working capital.
3. Acid test ratio.
4. Average age of accounts receivable.
5. Ratio of inventory turnover. (Beginning inventory, $40,000.00.)
6. Ratio of liabilities to net worth.
7. Book value per share of common stock.
8. Ratio of net income to sales.
9. Ratio of net income to net worth. The only entries in the Retained Income account during 19__ were for the year's profit of $20,000.00 and dividends paid, $10,000.00.
10. Net income earned per share of common stock.

Problem 29–2. The condensed balance sheets of the Royal Candy Company (whose income statements appeared in Problem 28–1, page 618) for the dates indicated were:

	DECEMBER 31	
Assets	*1958*	*1957*
Current Assets:		
Cash	$ 11,000.00	$ 28,000.00
Accounts Receivable	40,000.00	25,000.00
Notes Receivable		20,000.00
Merchandise Inventory	38,000.00	20,000.00
Marketable Securities	20,000.00	5,000.00
	$109,000.00	$ 98,000.00
Fixed Assets:		
Plant and Property	$ 60,000.00	$ 60,000.00
Less Allowance for Depreciation	(24,000.00)	(18,000.00)
	$ 36,000.00	$ 42,000.00
Land	10,000.00	10,000.00
	$ 46,000.00	$ 52,000.00
	$155,000.00	$150,000.00
Liabilities and Capital		
Current Liabilities:		
Vouchers Payable	$ 30,000.00	$ 25,000.00
Notes Payable		20,000.00
Wages and Salaries Payable		5,000.00
	$ 30,000.00	$ 50,000.00
Capital:		
Common Stock, $100.00 par (*Note:* Common stock of $20,000.00 par value was sold on December 20, 1958)	$100,000.00	$ 80,000.00
Retained Income	25,000.00	20,000.00
	$125,000.00	$100,000.00
	$155,000.00	$150,000.00

Required

1. Using the above comparative balance sheets and, where required, the comparative statements of income on page 618, calculate the following ratios:

a) Current ratio for 1958 and 1957.
b) Acid test ratios for 1958 and 1957.
c) Ratio of accounts receivable to net sales for 1958 and 1957. How old are the accounts receivable at the end of each year?
d) Ratio of merchandise turnover for 1958.
e) Ratio showing productivity (as measured by sales) of working capital for 1958 and 1957.
f) Ratio of fixed assets to total assets for 1958 and 1957.
g) Ratio of sales to fixed assets for 1958 and 1957.
h) Ratio showing productivity (as measured by sales) of the net investment in the business, 1958 and 1957.
i) Net worth ratio for 1958 and 1957.
j) Ratio of net income to net worth for 1958 and 1957. On December 31, 1956, the capital stock of the company was $80,000.00, and retained income, $16,000.00.

2. What are your conclusions with respect to the balance sheets of the two dates in question?

Problem 29–3

The Campus Corporation

COMPARATIVE STATEMENTS OF INCOME
FOR THE YEARS ENDED DECEMBER 31, 1958 AND 1957

	1958	*1957*
Sales	$1,050,000.00	$510,000.00
Less Returned Sales and Allowances	50,000.00	10,000.00
	$1,000,000.00	$500,000.00
Cost of Sales	600,000.00	310,000.00
Gross Profit	400,000.00	$190,000.00
Selling Expenses:		
Advertising Expense	$ 65,000.00	$ 20,000.00
Miscellaneous Sales Expenses	60,000.00	50,000.00
Sales Salaries	80,000.00	30,000.00
	$ 205,000.00	$100,000.00
General Expenses:		
Administrative Salaries	$ 90,000.00	$ 60,000.00
Miscellaneous General Expense	35,000.00	20,000.00
	$ 125,000.00	$ 80,000.00
Total Expenses	$ 330,000.00	$180,000.00
Net Profit from Operations	70,000.00	10,000.00
Less Loss from Flood and Storm	50,000.00	
Net Income	$ 20,000.00	$ 10,000.00

The Campus Corporation

COMPARATIVE BALANCE SHEETS, DECEMBER 31

Assets	*1958*	*1957*
Current Assets:		
Cash	$ 155,000.00	$150,000.00
Accounts Receivable	200,000.00	235,000.00
Merchandise Inventory	200,000.00	100,000.00
Marketable Securities, at cost (Market values, 1958, $125,000.00; 1957, $30,000.00)	25,000.00	25,000.00
	$ 580,000.00	$510,000.00
Fixed Assets:		
Land	$ 40,000.00	$ 40,000.00
Building	300,000.00	300,000.00
Less Allowance for Depreciation	(120,000.00)	(90,000.00)
	$ 220,000.00	$250,000.00
	$ 800,000.00	$760,000.00
Equities		
Accounts Payable, etc.	$ 200,000.00	$250,000.00
Common Stock, $100.00 par	500,000.00	400,000.00
Retained Income	100,000.00	110,000.00
	$ 800,000.00	$760,000.00

Dividends paid, 1958, $30,000.00; 1957, $20,000.00.

Required

What are your conclusions with respect to the company's progress or lack of progress in 1957–1958?

Problem 29–4. Following are the condensed financial statements for 19__ for two companies in the same line of business:

STATEMENT OF INCOME FOR THE YEAR ENDED DECEMBER 31, 19__

	Company A	*Company B*
Sales (net 30 days)	$1,010,000.00	$2,650,000.00
Less Returned Sales	10,000.00	150,000.00
	$1,000,000.00	$2,500,000.00
Cost of Sales:		
Inventory, December 31, 19__	$ 140,000.00	$ 500,000.00
Purchases (2/10, n/30)	575,000.00	1,345,000.00
Returned Purchases	(5,000.00)	(35,000.00)
Purchases Discounts	(15,000.00)	(20,000.00)
Freight In	10,000.00	30,000.00
	$ 705,000.00	$1,820,000.00
Inventory, December 31, 19__	150,000.00	400,000.00
	$ 555,000.00	$1,420,000.00
Gross Profit	$ 445,000.00	$1,080,000.00
Selling Expenses	$ 300,000.00	$ 660,000.00
General Expenses	110,000.00	250,000.00
	$ 410,000.00	$ 910,000.00
Net Profit	$ 35,000.00	$ 170,000.00

BALANCE SHEET, DECEMBER 31, 19__

Assets

Current Assets:		
Cash	$ 147,500.00	$ 105,000.00
Accounts Receivable	75,000.00	125,000.00
Inventory	150,000.00	400,000.00
Prepaid Expenses	2,500.00	5,000.00
	$ 375,000.00	$ 635,000.00
Fixed Assets:		
Miscellaneous Equipment	$ 600,000.00	$ 850,000.00
Less Allowance for Depreciation (annual rate, 10%)	400,000.00	200,000.00
	$ 200,000.00	$ 650,000.00
	$ 575,000.00	$1,285,000.00

Equities

Current Liabilities:		
Accounts Payable	$ 75,000.00	$ 250,000.00
Capital:		
Common Stock, $100.00 par	300,000.00	500,000.00
Retained Income	200,000.00	535,000.00
	$ 575,000.00	$1,285,000.00

Required

What are the comparative merits of the two companies?

Problem 29–5. From the following comparative financial statements, prepare an analysis of the progress of the General Sales Corporation over the years 1955–1960.

General Sales Corporation

COMPARATIVE STATEMENTS OF INCOME

	1960	*1959*	*1958*	*1957*	*1956*	*1955*
Sales	$13,369,344	$10,403,281	$11,690,058	$16,011,103	$19,061,556	$16,417,750
Cost of Sales	8,823,767	6,970,198	7,890,789	11,047,661	13,343,089	11,820,780
Gross Profit	$ 4,545,577	$ 3,433,083	$ 3,799,269	$ 4,963,442	$ 5,718,467	$ 4,596,970
Depreciation Expense	$ 678,068	$ 664,941	$ 625,869	$ 607,208	$ 631,694	$ 647,063
Other Operating Expenses	1,656,504	1,686,752	1,918,297	2,030,915	2,163,037	1,659,495
	$ 2,334,572	$ 2,351,693	$ 2,544,166	$ 2,638,123	$ 2,794,731	$ 2,306,558
Net Profit on Operations	$ 2,211,005	$ 1,081,390	$ 1,255,103	$ 2,325,319	$ 2,923,736	$ 2,290,412
Add Miscellaneous Income	470,542	212,672	364,400	283,640	294,120	79,381
Less Bond Interest Expense					50,003	153,986
	$ 2,681,547	$ 1,294,062	$ 1,619,503	$ 2,608,959	$ 3,167,853	$ 2,215,807
Provision for Income Taxes	1,061,648	484,456	616,680	797,612	898,213	672,371
Net Income	$ 1,619,899	$ 809,606	$ 1,002,823	$ 1,811,347	$ 2,269,640	$ 1,543,436

General Sales Corporation

COMPARATIVE BALANCE SHEETS AS OF DECEMBER 31

Assets	*1960*	*1959*	*1958*	*1957*	*1956*	*1955*
Cash	$ 313,375	$ 603,223	$ 302,504	$ 333,834	$ 443,163	$ 520,787
U. S. Government Securities	3,488,000	2,585,000	1,825,500	1,900,000	1,900,000	1,600,000
Accounts and Notes Receivable	567,320	447,171	526,311	730,649	1,563,325	1,282,290
Inventories	1,869,504	1,555,894	2,114,599	2,708,239	2,900,695	2,943,099
Prepaid Expenses	162,408	188,192	284,706	256,049	251,801	269,505
Current Assets	$ 6,400,607	$ 5,379,480	$ 5,053,620	$ 5,928,771	$ 7,058,984	$ 6,615,681
Miscellaneous Investments and Advances	986,828	1,008,738	1,048,435	634,613	729,202	547,063
	$ 7,387,435	$ 6,388,218	$ 6,102,055	$ 6,563,384	$ 7,788,186	$ 7,162,744
Land, Buildings, Machinery, etc.	$11,167,207	$11,345,669	$11,873,832	$11,822,486	$11,760,614	$12,264,823
Less Allowance for Depreciation	5,498,025	5,033,366	4,865,385	4,288,842	3,790,470	3,337,823
	$ 5,669,182	$ 6,312,303	$ 7,008,447	$ 7,533,644	$ 7,970,144	$ 8,927,000
Goodwill	1	1	1	1	1	1
	$13,056,618	$12,700,522	$13,110,503	$14,097,029	$15,758,331	$16,089,745
Equities						
Accounts Payable	$ 196,226	$ 87,307	$ 278,602	$ 209,335	$ 337,952	$ 487,246
Income Taxes Payable, etc.	1,140,211	521,622	636,905	866,510	928,470	870,087
Current Liabilities	$ 1,336,437	$ 608,929	$ 915,507	$ 1,075,845	$ 1,266,422	$ 1,357,333
Bonds Payable, due Jan. 1, 1960						2,000.000
6% Preferred Stock, $100.00 par					2,566,800	2,889,500
Common Stock, no-par	4,481,394	4,800,437	4,800,437	5,714,699	5,714,699	5,714,699
Retained Income	7,238,787	7,291,156	7,394,559	7,306,485	6,210,410	4,128,213
	$13,056,618	$12,700,522	$13,110,503	$14,097,029	$15,758,331	$16,089,745
Shares of common stock outstanding	390,000	400,000	400,000	424,965	424,965	424,965

Problem 29–6. For the year ended December 31, 19__, the Mannen Sales Company had sales of $80,000.00, an average inventory of $22,000.00 and a gross profit of 45%. For the following year, the company planned on having a 20% increase in sales, a 50% increase in the rate of merchandise turnover, and a gross profit percentage of 50%.

What average inventory did the company plan to carry in the new year?

Problem 29–7. In 1957 the H. P. Bradley Company had sales of $2,000,000.00, an average inventory of $550,000.00, and a gross profit of 45%. In 1958 the company had sales of $2,400,000.00, a 50% increase in its rate of merchandise turnover, and a gross profit of 50%.

What was the amount of the company's average inventory in 1958?

Problem 29–8. Last year the ABC Company had sales of $100,000.00, cost of sales, $60,000.00, expenses of $30,000.00, and an average inventory of $20,000.00.

What would the statement of income have been, if, for the year,

the physical volume of sales had been 20% greater and selling prices 5% less per unit; and if the rate of merchandise turnover had been increased to 3.5, assuming no change in the amount of the company's investment in inventory?

Problem 29–9. At the beginning of the year 19__, the inventory of the Newark Sales Company was $17,300.00. At the end of the year the inventory was $22,700.00. The statement of income for the year showed that

the rate of merchandise turnover was 4.2,
purchases amounted to 106% of the cost of sales,
freight in amounted to $360.00,
the ratio of gross profit to sales was 30%,
selling expenses were 15% of sales, and
general expenses were 5% of sales.

Required

A detailed statement of income for the year 19_

Problem 29–10. With respect to Problem 29–9 the vice-president suggested that it might be advantageous for the company to plan its operations for the new year somewhat as follows:

Carry the same average inventory as before but realize a merchandise turnover of 5.0.

Reduce selling prices by 10%, assuming unit costs to continue unchanged.

Plan for the same expense, in dollars, as was incurred in the past year.

Required

An estimated statement of income for the new year, incorporating the recommendations of the vice-president. Should his recommendations be approved?

Problem 29–11. Certain accounts appearing on the financial statements of the Benway Company for the year 1958 were

Sales	$136,740.00	Cost of sales	$82,044.00
Inventory, December 31, 1957	24,989.00	Selling and general expenses	42,726.00
Inventory, December 31, 1958	16,033.00	Accounts receivable, December 31, 1958	41,022.00

Required

1. How many days will it take to collect the accounts receivable?
2. On the basis of a 4.0 ratio for the productivity of working capital, how much net working capital is employed by this business?
3. It is suggested that a 10% reduction in selling prices for 1959 will result in a merchandise turnover ratio of 5.0 per year (assuming the same average investment in inventory) and an increase in selling and general expenses of $2,000.00. Would the company earn more or less profit in 1959 by adopting this proposal? Prove by setting up two statements of income, one showing expected normal results, the other the estimated results expected to be achieved under the plan proposed.

Problem 29–12. Following are the accounts of the balance sheet of the Union Carbon Corporation, December 31, 1959:

Cash	$ 78,566,746.51	
Marketable Securities (held as short-term investments of working capital)	2,737,741.03	
Trade Notes and Accounts Receivable	24,616,754.65	
Miscellaneous Notes and Accounts Receivable	2,074,054.04	
Finished Goods	14,384,518.51	
Work in Process	12,044,169.02	
Raw Materials	23,803,350.56	
Prepaid Insurance, Taxes, etc.	2,308,174.70	
Net Current Assets Located Outside the United States and Canada	11;377,652.69	
Marketable Securities (held as long-term investments)	1,341,125.84	
Investments in Affiliated Domestic and Foreign Companies	4,643,935.60	
Buildings, Machinery, and Equipment	270,574,237.68	
Allowance for Depreciation		$103,802,932.55
Land	20,000,000.00	
Patents, Trademarks, and Goodwill	1.00	
Accounts Payable		12,025,275.98
Taxes Payable (including Income Taxes, $17,434,666.00)		25,736,782.18
Bond Interest Payable		250,000.00
Miscellaneous Accrued Liabilities		1,170,602.71
Dividend Payable, January 1, 1960		6,958,341.00
Fifteen-Year, 2½% Sinking Fund Debentures, due serially to September 1, 1972		30,000,000.00
Capital Stock, 9,277,788 shares no par value		192,879,842.43
Retained Income		95,648,684.98
	$468,472,461.83	$468,472,461.83

Inventories and marketable securities are valued at cost. Of the $30,000,000.00 of debenture bonds outstanding, an installment of $1,000,000.00 is payable September 1, 1960.

Required

Balance sheet, December 31, 1959.

Problem 29–13. The following accounts appeared in the balance sheet of Shearer & Company, Inc., December 31, 1958:

Cash	$ 115,905.00	
Accounts Receivable (including accounts with employees', $8,000.00, and customers' accounts with credit balances, $1,076.00)	153,000.00	
Allowance for Uncollectible Customers' Accounts		$ 12,074.00
Notes Receivable	60,000.00	
Notes Receivable Discounted		35,000.00
Stocks and Corporation Bonds, at cost[a]	84,016.00	
Finished Goods, at cost[b]	36,014.00	
Work in Process	44,072.00	
Raw Materials[c]	31,011.00	
Prepaid Advertising	1,588.00	
Prepaid Insurance	3,670.00	
U. S. Government Bonds, at amortized cost	99,020.00	
Plant, Machinery, and Equipment	412,513.00	
Allowance for Depreciation		88,088.00
Land	25,000.00	
Patents	40,000.00	
Organization Expense	7,210.00	
Experimental and Research Costs	72,062.00	
Goodwill	50,000.00	
Accounts Payable (including accounts with debit balances, $4,920.00)		116,102.00
Accrued Expenses Payable		15,609.00
Dividends Payable on Preferred Stock		4,000.00
Notes Payable		50,000.00
Deferred Rent Income		3,468.00
6% Bonds Payable, due in annual installments of $25,000.00 beginning January 1, 1959		250,000.00
Discount on Bonds Payable	5,000.00	
Preferred Stock, 8% Cumulative, 100.00 par		100,000.00
Common Stock, $100.00 par		500,000.00
Treasury Stock, Common, 300 shares[d]	30,000.00	
Paid-in Surplus		39,631.00
Retained Income		46,109.00
Reserve for Contingencies		10,000.00
	$1,270,081.00	$1,270,081.00

[a] Market value, $72,844.00. These stocks and bonds were carried as short-term investments.

[b] Market (replacement) value, $40,000.00.

[c] Market (replacement) value, $25,028.00.

[d] Acquired at a cost of $25,000.00, the difference of $5,000.00 being credited to Paid-in Surplus.

Required

Balance sheet, December 31, 1958. The United States Government bonds are long-term investments of Shearer & Company, Inc.

Problem 29–14. The condensed balance sheets of Freeman & Company, December 31, 1958 and 1957, were

Assets	*1958*	*1957*
Cash	$ 2,600,000.00	$ 2,200,000.00
Accounts Receivable	1,200,000.00	700,000.00
Inventories	5,600,000.00	5,700,000.00
Investment in Los Angeles Shopping Mart	2,700,000.00	1,700,000.00
Plant and Equipment	7,500,000.00	5,600,000.00
Allowance for Depreciation	(2,500,000.00)	(2,000,000.00)
Land	1,000,000.00	1,400,000.00
	$18,100,000.00	$15,300,000.00
Liabilities and Stockholders' Equity		
Accounts Payable	$ 2,900,000.00	$ 1,900,000.00
Income and Property Taxes Payable	700,000.00	400,000.00
Bonds Payable, due January 1, 1965		2,000,000.00
Common Stock, $100.00 par	10,000,000.00	7,000,000.00
Retained Income	4,500,000.00	4,000,000.00
	$18,100,000.00	$15,300,000.00

The company's net income for the year ended December 31, 1958, after depreciation expense of $500,000.00, was $2,500,000.00. Dividends paid during 1958 amounted to $2,000,000.00.

Required

Statement of source and application of funds for the year ended December 31, 1958. This statement should be supported by a supplementary schedule of working capital.

Problem 29–15. The condensed balance sheets of the Layton Sales Company on December 31, 1959 and 1958, were

Assets	*1959*	*1958*
Cash	$2,700,000.00	$2,200,000.00
Accounts Receivable	1,800,000.00	2,000,000.00
Inventories	1,600,000.00	1,000,000.00
U. S. Government Bonds (short-term)	1,000,000.00	
Land	100,000.00	100,000.00
Plant and Equipment (after allowances for depreciation: 1959, $200,000.00, 1958, $100,000.00)	1,000,000.00	1,100,000.00
Goodwill		1,000,000.00
	$8,200,000.00	$7,400,000.00

Liabilities and Stockholders' Equity

Accounts Payable	$1,000,000.00	$1,200,000.00
Taxes Payable	500,000.00	200,000.00
Bonds Payable, due January 1, 1966		1,000,000.00
Preferred Stock, $100.00 par		1,000,000.00
Common Stock, $100.00 par	5,000,000.00	2,000,000.00
Retained Income	1,700,000.00	2,000,000.00
	$8,200,000.00	$7,400,000.00

Net income on the profit and loss statement for 1959 was $1,200,-000.00. Depreciation expense was $300,000.00. Dividends paid in 1959 amounted to $500,000.00. Goodwill of $1,000,000.00 was written off during 1959 by a direct debit to Retained Income. During the year, disbursements for "major plant improvements" were debited to the Allowance-for-Depreciation account.

Required

Statement of source and application of funds for the year ended December 31, 1959, supported by a supplementary schedule of working capital.

Chapter 30

THE PROBLEM OF ACCOUNTING VALUATIONS

Introduction

Just as the income statement and the balance sheet are the fundamental statements of accounting, so is valuation the fundamental component of each of these statements. The statement of income will *fairly* present the net income of a business and the balance sheet will *fairly* present its financial position only if the constituent accounting values of these statements are fairly stated. Valuation is the heart of the statement of income. It is also the heart of the balance sheet.

The problem of valuation is never-ending. When assets are acquired there is the problem of initial valuation as of the date of acquisition. At the end of each accounting period there is the problem of revaluation, i.e., amortized costs and the recording and matching of expired costs in the statement of income. The acquisition, disbursement, and consumption of value in a going business is so continuous a process that each new balance sheet and each new statement of income are statements of new accounting values. Wealth is not a static thing. It is dynamic, a thing of life. The accounting values of business change so continuously that successive balance sheets and statements of income are statements of new values.

The problem of valuation is so broad and complex that its full consideration cannot be undertaken in a text on elementary accounting. Only an introduction can be attempted in this book. Valuation, as discussed in this chapter, will be accounting valuation presented from the standpoint of a going business.

The problem of valuation initially requires that expenditures be classified into expenditures for capital purposes and those for revenue purposes (see also page 544). Expenditures which are wrongly capitalized result in an overstatement of net income as well as an inflation of the asset values of the balance sheet. Expenditures which are improperly debited to expense result in an understatement of net income and also the asset values of the balance sheet. Correct classification of expenditures is the corner-

stone of sound valuation accounting. No expenditure should be capitalized unless there is positive assurance of the present existence of accounting value, a value which genuinely is a cost of future income.

The principle of valuation at *cost* for most assets is important. These assets should be recorded at cost on their dates of acquisition, this cost being defined as the minimum cash outlay required to purchase an asset and place it into productive use. On successive balance sheet dates, current assets (except inventories) should generally be valued upon the basis of their expected normal convertibility into cash within twelve months or the operating cycle of a business. Within the framework of this general rule is included the specific rule of cost or market, whichever is lower. This rule has some favor as a conservative rule for the valuation of certain current assets, especially inventories. Fixed assets should be valued at cost less adequate cumulative depreciation or depletion to date, with a corresponding absorption of expired costs in the statement of income. Other assets, such as intangibles, should be valued at conservative cost—in some cases original cost less adequate amortization to date, in other cases at original cost without a deduction for amortization. In all cases, however, the individual values of the assets (and liabilities) of each balance sheet should be established in conformity with accepted principles of accounting. As stated before, the determination of these values is fundamental not only to the fairness of the balance sheet but also to the fairness of the value for net income on the statement of income.

When assets are sold or retired from service, the net book values of these assets should be cleared from the accounts.

The problems of valuation which follow are discussed in the order in which the accounts appear on the balance sheet.

CURRENT ASSETS

Cash

Cash includes

Coin and currency
Checks of current date, undeposited but good
Express and postal money orders
Funds in bank checking accounts

Cash which is restricted, such as savings accounts, time deposits, or sinking funds (controlled by an independent trustee), should not be included in the general cash of a business. General cash is unrestricted cash freely available for the payment of current liabilities.

Dishonored customers' checks should not be included with the cash of a balance sheet. These checks should be included with the accounts of a business at their face values. Probable losses to be sustained on the collec-

tions of these checks should be provided for in the allowance for bad debts account.

Accounts Receivable

The accounting value of accounts receivable should be face value less an adequate provision for uncollectible accounts. The remainder represents the estimated amount of cash expected to be realized upon the collection of accounts receivable. If the cash value of accounts receivable is to be stated more precisely, a further deduction from accounts receivable should be made to cover the amount of sales discounts which are yet available to customers with unpaid accounts. Accounts receivable would then appear on the balance sheet in the following manner:

Accounts Receivable.		$106,000.00	
Less Allowance for Bad Debts . .	$6,000.00		
Allowance for Sales Discounts .	1,000.00	7,000.00	$99,000.00

From this discussion it follows that if it is logical to deduct available sales discounts from accounts receivable, it is also logical for available purchases discounts to be deducted from accounts payable (on the liability side of the balance sheet).

The accounting entries underlying the use of allowances for cash discounts—relating to accounts receivable and accounts payable—are described in the author's *Intermediate Accounting*.

Notes Receivable

Notes receivable should be valued at face value less an allowance for bad debts as appropriate. Past-due and dishonored notes receivable should be separately classified or included with accounts receivable, less an adequate allowance for bad debts to cover amounts estimated as uncollectible.

Marketable Securities

Stocks and bonds should be recorded at cost. Cost includes brokerage fees, taxes, and other costs incidental to the purchase of securities. The accounting valuation of these securities at later dates is "cost." In using cost as the basis of valuation, a memorandum as to the current market value of securities should be included in the balance sheet, thus:

Stocks and Bonds, at cost (market value, $125,000.00) . .	$100,000.00

The memorandum as to market value is especially important when marketable securities are held as part of the working capital of a business.

Securities which are owned as long-term investments should appear in the balance sheet at cost or amortized cost, as appropriate.

Stocks and bonds may be purchased at various prices. When securities are sold, their cost should be cleared from the proper stock or bond account. If a sold security cannot be identified as belonging to a specific purchase and therefore as belonging to part, or all, of a specific cost, the accounting should proceed on the assumption that the first securities sold were the first securities purchased.

As a general rule the balance of an account representing an investment in capital stock is not affected by the receipt of a cash or stock dividend.

Merchandise Inventory

Because of its effect upon the income of a business, the valuation of merchandise inventory is one of the most important of accounting valuation problems. It is often a problem of some complexity as well. The following discussion represents a condensation of current methods in use for determining the accounting valuation of an inventory. As a general rule, inventories are valued at cost. There are, however, several definitions of cost.

I. Valuation at cost

What is cost? There are several answers to this question:

1. Each item of a like group of items in an inventory is valued at the price of the last purchase made in that group as, for example,

Purchases of article A in 1958:

January 2	2,000 @ $1.00 =	$2,000.00
June 1	2,200 @ $1.25 =	2,750.00
October 1	800 @ $1.50 =	1,200.00

Inventory, December 31, 1958:

Quantity	1,000 units
Valuation	1,000 @ $1.50 = $1,500.00

This method of pricing an inventory will provide acceptable results when the price used is a satisfactory statistical representative of the prices paid in acquiring the inventory on hand.

2. Each item of an inventory is valued at its actual invoice cost as, for example,

Inventory, December 31, 1958:

Quantity	1,000 units which, upon analysis, represent	
	100 units of purchase of January 2	
	200 units of purchase of June 1	
	700 units of purchase of October 1	
	1,000	
Valuation	100 @ $1.00 =	$ 100.00
	200 @ $1.25 =	250.00
	700 @ $1.50 =	1,050.00
		$1,400.00

This method of "costing" an inventory is an accounting valuation which represents the actual price paid for the inventory. In practice, however, this method of costing an inventory is sometimes not practicable because of the expense which the method involves and because of the difficulty of associating each item of an inventory with a particular purchase.

3. Each item of inventory is valued at average cost:

Inventory, December 31, 1958:

Quantity	1,000 units	
Valuation	1,000 @ $1.25 (simple average cost)	= $1,250.00
	or	
	1,000 @ $1.19 (weighted average cost)	= $1,190.00

4. Each item of inventory is valued upon a "first-in, first-out" basis. It is assumed that the inventory on hand represents the last merchandise purchased, thus:

Inventory, December 31, 1958:

Quantity	1,000 units	
Valuation	800 @ $1.50 (October 1 purchase)	= $1,200.00
	200 @ $1.25 (June 1 purchase)	= 250.00
		$1,450.00

The "first-in, first-out" basis for the valuation of inventory is widely used. Under this method merchandise purchases, and their exact invoice costs, are assumed to enter cost of sales in the order in which the purchases were made.

5. Each item of inventory is valued upon a "last-in, first-out" basis. It is assumed that the value of a new inventory represents the value of the earliest purchases made, thus:

Inventory, December 31, 1958:

Quantity	1,000 units	
Valuation	1,000 @ $1.00 (January 2 purchase)	= $1,000.00

Advocates of this method of valuation point out that it causes current revenues to be charged with a cost of sales equal to current costs. By matching high costs against high selling prices, and vice versa, it is presumed that net income will be more "fairly" stated.

Thus, in this brief discussion, the valuation of an inventory "at cost" may mean any one of the following valuations:[1]

Method	*Valuation*
1	$1,500.00
2	1,400.00
3	1,250.00 or $1,190.00
4	1,450.00
5	1,000.00

[1] Additional methods of valuing an inventory "at cost" are discussed in texts on advanced accounting and auditing.

It should be clear that each of these valuations "at cost" will have varying effects upon the accounting values for inventory and net worth in the balance sheet, and upon the values for gross profit and net income in the statement of income.

In the interest of greater accuracy, each of these valuations at "cost" should be increased by transportation charges paid by the purchaser up to the date that the goods in an inventory were received by him at his place of business. For even greater accuracy, it would be proper, further, for each of these valuations to be reduced by the amount of purchases discount applicable to it.

II. Valuation at cost or market, whichever is lower

This method for the valuation of an inventory is widely used. The term "market" means the current replacement cost of an inventory as of the date of a balance sheet. For income tax purposes the Treasury Department defines market value as follows: "Under ordinary circumstances 'market' means the current bid price prevailing at the date of the inventory for the particular merchandise in the volume in which [it is] usually purchased by the taxpayer."

Under this method, if an inventory has a current replacement cost in excess of the actual cost paid for the inventory, the inventory is valued at its incurred cost. The inventory is not valued at market value because this valuation would inject an unrealized profit into the accounts and statements of a business. Income would be overstated for the year in which the ending inventory is overvalued. A profit can be realized *only* through the disposal of an asset by sale.

If the inventory has a market value less than cost, the inventory is valued at market value. The shrinkage in inventory value is taken up as a loss of the current accounting period although the loss, admittedly, is unrealized. The loss is included in the statement of income as a matter of conservatism—a desire to anticipate no profit and to provide for all possible losses.

Under the rule of "cost or market, whichever is lower," it has long been customary to obtain the accounting value of the inventory by applying the rule to each item of inventory, thus:

	Cost	*Market*	*Value of Inventory*
Article A	$ 9,000.00	$10,000.00	$ 9,000.00
Article B	11,000.00	8,000.00	8,000.00
Article C	10,000.00	7,000.00	7,000.00
	$30,000.00	$25,000.00	$24,000.00

Today, however, an acceptable alternative valuation is to take the lower of cost or market for the *total inventory* as the accounting value of the inventory—in the above case, $25,000.00.

From the standpoint of the balance sheet, valuation of the inventory at "cost or market, whichever is lower" is conservative valuation. From the standpoint of the statement of income, however, the use of a value which is less than cost—for arriving at the value for cost of sales—will not yield accurate gross profit information. This may be illustrated as follows:

	WITH INVENTORY VALUED AT	
	Cost	*Market*
Sales	$100,000.00	$100,000.00
Cost of Sales:		
Purchases	$ 90,000.00	$ 90,000.00
Inventory, December 31, 19__:		
At cost	30,000.00	
At lower of cost or market		25,000.00
	$ 60,000.00	$ 65,000.00
Gross Profit	$ 40,000.00	$ 35,000.00
Selling and General Expenses	29,000.00	29,000.00
Net Income	$ 11,000.00	$ 6,000.00

The following statement of income would seem to be a better representation of what has occurred:

Sales		$100,000.00
Cost of Sales:		
Purchases	$90,000.00	
Inventory, December 31, 19__, at cost	30,000.00	60,000.00
Gross Profit		$ 40,000.00
Selling and General Expenses		29,000.00
Net Profit from Operations		$ 11,000.00
Special Income Debit:		
Write-down of Inventory to lower of cost or market		5,000.00
Net Income		$ 6,000.00

Under the "lower of cost or market" rule, the inventory will appear on the balance sheet at either of the following costs:

1. Replacement cost if this cost is less than the actual cost incurred in the acquisition of the inventory, thus:

   Merchandise inventory, at lower of cost or market . . . $25,000.00

2. The actual cost incurred in the acquisition of the inventory if this cost is less than replacement cost.

The "cost or market, whichever is lower" rule of inventory valuation is one which has enjoyed long favor among accountants. It is a rule of conservatism, one which emphasizes the philosophy of anticipating no profits and providing for all possible losses. In recent years, however, there has been in evidence a tendency to apply the rule less rigidly. For example, if the replacement cost of an inventory is less than the actual price paid for the inventory, the tendency is to value the inventory at its actual cost

if it is probable that the inventory on hand can be sold at normal selling prices and at normal margins of gross profit. If this is not a reasonable probability, the inventory may be valued at less than actual cost but at more than its replacement cost by pricing it at its expected selling price *less* an expected normal margin of gross profit.

III. Retail method of inventory valuation

The valuation of an inventory of merchandise under the "retail method of inventory" is illustrated in the following calculation:

	Cost	*Retail*
Inventory, December 31, 1957	$18,000.00	$ 26,000.00
Purchases	47,200.00	72,000.00
Freight In	1,800.00	
Markups (in addition to original markup)		2,000.00
Total merchandise to be accounted for	$67,000.00	$100,000.00
(*Note:* Cost is 67% of retail.)		
Sales		$ 60,000.00
Markdowns		4,000.00
Sales at intended retail		$ 64,000.00
Inventory, December 31, 1958:		
At retail		$ 36,000.00
At cost (67% × $36,000.00)	$24,120.00	

The following conditions are necessary to the successful use of the retail method of inventory:

1. Accurate information must be maintained for the following:

   Purchases at cost and at retail
   Other merchandise costs (like freight in and import duties)
   Markups

   Sales
   Markdowns

This information must be maintained by departments or sections if the rate of markup varies for these departments or sections. Inventories, accordingly, must be determined for each department or section. The rate of markup should be uniform within a section or department as the case may be.

2. A physical inventory should be taken at least annually.

IV. Valuation of inventories of manufacturing companies

As a general rule,

raw materials are valued at cost, i.e. one of the valuations at cost as described on page 659;
work in process is valued at cost as represented by manufacturing costs incurred to date; and
finished goods are valued at manufacturing cost.

Inventories of raw materials and finished goods, as stated, are valued at cost. Should the replacement costs of these inventories be significantly less than their invoice or manufacturing costs, it would be proper to value these inventories under the rule of cost or market, whichever is lower, as described on pages 661–663.

GENERAL COMMENTARY ON INVENTORIES Some comment should be made on the matter of interim financial statements and the inventory values which form a part of these statements. Interim financial statements, of course, are prepared directly from work sheets; the books are not closed. The accounting fairness of interim financial statements, no less than that of the annual statements, is importantly dependent upon the accounting valuations which are placed upon inventories. It would be well, of course, for these valuations to be established upon the bases of actual physical counts of inventory at the end of each interim period. However, managements are often satisfied to have these statements based on estimated inventories rather than on actual physical inventories because estimated inventories involve less expense and because the estimated values are believed to approximate closely the real values involved. But after the ledger has accumulated its data for twelve months and the financial statements of a business are to be prepared, inventory values resting on physical counts must be used.

One final word is necessary. The merchandise inventory must be owned by the business on whose accounts and financial statements the inventory is to appear as an asset. Only merchandise on hand and in transit to which the purchaser has title should be included in an inventory and its valuation; all other merchandise (consignment merchandise on hand, or purchases in transit f.o.b. destination, for example) should be excluded. It is important that the accountant be well acquainted with the law of sales relating to the dates at which title passes in order to be fully assured that the merchandise inventory and accounts payable of a business are fairly valued.

As a general rule, it may be said that title to merchandise passes when the parties intend it to pass. If their intention is not clear, recourse may be had to rules established for the purpose of determining the dates at which titles pass. These detailed rules are found in the Uniform Sales Act, Sections 17–22, an act which has been adopted by New York and more than twenty-five other states.

Important excerpts from the Uniform Sales Act are reprinted below:

Sec. 18. (1) Where there is a contract to sell specific or ascertained goods, the property in them is transferred to the buyer at such time as the parties intend it to be transferred.

(2) For the purpose of ascertaining the intention of the parties, regard shall

be had to the terms of the contract, the conduct of the parties, usages of trade and the circumstances of the case.

Sec. 19. Rule 4. (1) Where there is a contract to sell unascertained or future goods by description, and goods of that description and in a deliverable state are unconditionally appropriated to the contract, either by the seller with the assent of the buyer, or by the buyer with the assent of the seller, the property in the goods thereupon passes to the buyer. Such assent may be expressed or implied, and may be given either before or after the appropriation is made.

(2) Where, in pursuance of a contract to sell, the seller delivers the goods to the buyer, or to a carrier or other bailee (whether named by the buyer or not) for the purpose of transmission to or holding for the buyer, he is presumed to have unconditionally appropriated the goods to the contract, except in the cases provided for in the next rule and in Section 101. This presumption is applicable although by the terms of the contract the buyer is to pay the price before receiving delivery of the goods, and the goods are marked with the words collect on delivery or their equivalent.

Rule 5. If the contract to sell requires the seller to deliver the goods to the buyer, or at a particular place, or to pay the freight or costs of transportation to the buyer, or to a particular place, the property does not pass until the goods have been delivered to the buyer or reached the place agreed upon.

This section on inventories may well conclude with the sentences with which it began: Because of its effect upon the income of a business, the valuation of merchandise inventory is one of the most important of accounting valuation problems. It is often a problem of some complexity as well.

Supplies

Office and factory supplies should be valued at cost as applied to a physical inventory of usable supplies.

LONG-TERM INVESTMENTS

Securities

As a general rule, stocks purchased for long-term investment purposes should be valued at cost, and bonds at their amortized cost. If the bonds were purchased at a price below par, their value on the date of a balance sheet should be cost plus discount amortized to date. If they were purchased at a price above par, their value on the balance sheet should be cost less premium amortized to date. If the information is important, the current market value of securities carried as long-term investments can be shown as parenthetical information on the balance sheet.

Again as a general rule, these market values are not shown on balance sheets. However, if current market values are significantly less than cost, a

special surplus reserve may be established (by authority of the board of directors of a business) as a precautionary measure.

Gains or losses realized on the disposal of securities carried as long-term investments should appear in the all-inclusive statement of income.

In certain cases the investment of one corporation in the stock of another corporation may be an investment large enough to represent a controlling interest. The relation of parent company and subsidiary corporation will then exist. In such cases the investment in the capital stock of the subsidiary corporation should be carried on the books of the parent company at cost.

When the balance sheet of the parent company is to be prepared, assuming that it is desirable for the net assets of the parent company to be consolidated with those of the subsidiary company, the actual assets and liabilities of the subsidiary company will be substituted for the investment account appearing on the books of the parent company. In more formal language, a consolidated balance sheet will be prepared. Concurrently, with respect to income, a consolidated statement of income will be prepared.

The preparation of consolidated financial statements is beyond the compass of this book. This topic is in the province of courses and texts in advanced accounting.

Sinking Fund with Trustee

This account should be

Debited with	*Credited with*
all deposits made with the trustee;	disbursements made by the trustee to retire bonds of issue;
dividends or interest received by the trustee;	losses on sales of sinking fund securities by the trustee;
profits on sales of sinking fund securities by the trustee.	trustee expenses paid out of sinking fund moneys.

FIXED ASSETS

As a general rule, fixed assets should be valued at cost less cumulative depreciation, depletion, or amortization to date. Cost includes the following:

1. Cost of acquisition:

   Invoice cost
   Freight and cartage
   Sales and excise taxes
   All costs incurred for the purpose of making the fixed asset ready for use (installation costs, running-in costs, and the like)

2. Cost of later capitalized additions

In arriving at proper accounting valuations for fixed assets, due regard should be given to the philosophy that fixed assets really represent long-term prepaid expenses, and that periodic provisions for depreciation, depletion, or amortization expense are made in order to record the portions of these prepayments which have been converted into expense during the income periods in question. This amortization of original cost is extremely important in properly matching costs against incomes and in determining, fairly, the amount of net income earned in any given period of accounting.

When a fixed asset is sold, or otherwise retired from service, the book value of the asset should be cleared from the accounts.

Appreciation in the value of fixed assets is usually not recognized in the accounts of a business. This rule, while conservative, is not entirely inflexible. Appreciation may be recognized in the accounts if it is "permanent" and if it is based on proper appraisal. The resulting surplus should be segregated in a special, properly titled surplus account, such as Appraisal Surplus. In succeeding accounting periods, the charges to operations for depreciation, depletion, or amortization should continue to be on the basis of original cost.

Buildings

Buildings should be recorded on the books at cost. This cost includes all reasonable expenditures incurred up to the date on which the building is ready for occupancy. Cost includes

Architects' fees
Building permit
Insurance paid during period of construction
Subsequent improvements

On the balance sheet buildings should appear at cost less cumulative depreciation to date.

Land

Land should be valued at cost. This includes cost of purchase and expenditures for permanent improvements, such as

Commissions
Draining, filling, grading
Paving
Sidewalks
Title fees
Water and sewer assessments

As a general rule land does not depreciate. It should, therefore, appear on the balance sheet at original cost.

The market price for land may sometimes be found to differ widely from original cost. Current market values, however, are generally not admitted to the balance sheet because variances of market values from costs represent *unrealized* gains or losses.

Tools

Tools should be valued on the balance sheet at depreciated cost. This valuation may be arrived at by either of the two following methods:

1. New tools are debited to an asset account, Tools, and their value written off in 2, 3, or 4 years. The credit may be to the Tools account, or to the Allowance for Depreciation—Tools account.
2. New Tools are debited to an asset account, Tools. At the end of the year a physical inventory of tools is taken and valued at cost, or estimated depreciated cost. The Tools account is written down to the new valuation, the amount of the write-down constituting an offset debit to Depreciation Expense—Tools.

INTANGIBLE ASSETS

General Rules of Valuation

Intangible assets are a special class of nontangible fixed assets of which brands, copyrights, formulas, franchises, goodwill, patents, and trademarks are leading examples. The chief common characteristics of intangible assets are these:

1. They are usually directly related to the future earnings of a business.
2. Their accounting value is generally dependent upon the "going-concern" concept of business enterprise. They attach to the enterprise as a whole. Although exceptions exist, like copyrights and patents, intangible assets generally show a tendency to be inseparable from the business which has title to them. Goodwill is an outstanding example.
3. They often have no liquidation value when separated from the business which owns them.

The test of the accounting value of intangible assets is earning power. To clothe intangible assets with accounting value, a business should have earning power large enough to cover satisfactorily not only its net tangible assets but its intangible assets as well. Thus, intangible assets should be capitalized only when they have a genuine present accounting value *defensible by the test of earnings yet to be realized from them.* When intangible assets are capitalized, debits to intangible asset accounts may properly include reasonable costs incurred to purchase and develop them, and to defend them successfully against legal attacks.

Intangible assets of definite life should be amortized over their commercial and useful life by periodic charges to operations. These write-offs are revenue-costs. Intangible assets of indefinite life would be valued by some accountants at cost with no deduction, ever, for amortization. Intangible assets of both definite and indefinite lives, however, deserve accounting values on the balance sheet of a business only when capital

has been invested in them and they are backed by the present certainty of future earning power.

The investiture of intangible assets with significant account balances raises practical problems of accounting valuations. At best, many of the valuations attending the intangible assets of business are characterized by transience and uncertainty. In the interest of financial conservatism, many companies have written off their intangible assets. Lump-sum write-offs of the accounting values of intangible assets should appear as special debits to income in the all-inclusive statement of income for an accounting period.

Many companies carry their intangible assets at a value of $1.00; such companies include Armstrong Cork Company, Brown Shoe Company, Pittsburgh Plate Glass Company, The Harshaw Chemical Company, and Union Carbide and Carbon Corporation.

In no case is there ever any warrant for the retention of an accounting valuation for an intangible asset whose income-earning ability has expired.

Copyrights

Copyrights have a legal life of twenty-eight years with privilege of renewal for a similar period. If the cost of a copyright is limited to the nominal fees paid to obtain the copyright, the cost of the copyright should be immediately debited to expense. If a copyright has been purchased, the cost of the copyright should be written off in proportion to gross copyright revenues as nearly as possible. Because copyright revenues generally last only a few years, the cost of a copyright should be written off against the income of these years and not the income of the years of longer legal life. Some companies go so far as to write off all costs of a copyright against the copyright revenues of the first year.

Goodwill

Goodwill exists when the annual average net income of a specific business is greater than the normal rate of return expected for the general line of business or industry of which the specific business is a part. Goodwill is the present valuation placed upon this *extra* earning power.

Goodwill may also be defined as follows: When a specific business has a market value over and above the fair market value of its net assets (excluding goodwill), the differential value is goodwill.

Goodwill exists because of reasons such as the following:

Efficient and courteous services
Favorable customer attitude and buying habits
Monopoly
Quality of merchandise
Possession of special privileges
Reputation for fair dealing
Location

It should be observed, however, that location is a factor in goodwill only when the value of location is not reflected in the value of the land.

When, for a given business, these factors—singly or in combination—result in the realization of earnings greater than normal for this line of business, goodwill exists. The real test of the existence of goodwill, to repeat, is the ability of a specific business to earn a rate of return greater than the rate which the business community looks upon as a "normal" rate of return for this general type of business.

It is a well-established principle of accounting that goodwill should not appear upon the books of a business unless it has been purchased.

There are several ways of determining the purchase price (i.e., valuation) of goodwill. In all of them there is the fundamental assumption that *earnings over and above normal* will continue for the benefit of future operations. Four methods for the determination of goodwill are:

I. Arbitrary sum for goodwill

Examples

1. Purchase price of business (round amount) $100,000.00
   Net assets (excluding goodwill) fairly valued 94,814.00
   Goodwill . . . . . $ 5,186.00

2. Purchase price of business:
   Net assets (excluding goodwill) fairly valued . . . $ 94,814.00
   Goodwill (round amount) 6,000.00
   $100,814.00

II. Goodwill is x *years' purchase of the average profits of a business for a period of years which are deemed representative of future periods*

Example

$10,000.00	Average yearly profits
× 3	Years of profits purchased
$30,000.00	Goodwill

III. Goodwill is x *years' purchase of amount by which the average annual profit of a specific business exceeds the "normal" average annual profit for this type of business*

Example

$80,000.00	Average amount of invested capital (excluding goodwill)
$10,000.00	Average profit earned per year, or an annual rate of 12½%
8,000.00	"Normal" average annual profit expected from this type of business, i.e., 10%
$ 2,000.00	Average profits earned above "normal" per year
× 5	Years for which these annual average profits above normal may be reasonably expected to continue
$10,000.00	Goodwill

This price of $10,000.00 represents the purchaser's belief that the average annual profits above normal of $2,000.00 have a relatively short period of future life, i.e., five years.

IV. Goodwill equals excess of annual average profits over "normal" annual profits capitalized at a "normal" rate of return, i.e., a rate normal to the specific business whose goodwill is being determined

Example

$80,000.00	Average amount of invested capital (excluding goodwill)
$10,000.00	Average profit earned per year, or a rate of 12½%
8,000.00	"Normal" average profit expected from this type of business, i.e., 10%
$ 2,000.00	Average profits earned above "normal" per year
÷	
10%	"Normal" annual rate of return
$20,000.00	Goodwill

In this example the rate of 10% means that the average annual profits of $2,000.00 above "normal" are expected to continue indefinitely because the business in question is expected to be able to continue to earn an annual net income of $10,000.00 indefinitely. This income-above-normal, then, is viewed as a perpetuity.

If the business continued to earn $10,000.00 annually, the purchaser will earn 10% on his capital investment of $100,000.00. He will earn the normal rate of return for this line of business. Furthermore, if the business continues to earn just 10%, and if 10% continues to be the normal rate of return, there will be no more profits "above normal" for this particular business.

If, under other conditions, the permanence of goodwill was doubtful because of uncertainty as to the length of the period for which the annual profits above normal might continue to be earned, the additional risk involved could be compensated for by using a higher rate for the capitalization of annual profits in excess of "normal." If a rate of 20% were used, goodwill would be $2,000.00 ÷ 20% = $10,000.00. If a rate of 25% were used, goodwill would be $2,000.00 ÷ 25% = $8,000.00. These high rates are used to allow for the unusual risk inherent in assuming the perpetuity of the differential annual income of $2,000.00.

A businessman would be likely to explain the use of the 20% rate as indicating that the excess profits promise to be short-lived, i.e., five years, and the 25% rate as indicating a probable life of four years. He is also very likely to state that the excess profits being purchased are those for five years, for four years, or for the number of years indicated by the rate used for the capitalization of excess earnings.

The first and second methods are not to be recommended. They disregarded the fundamental upon which goodwill rests, i.e., *earning power in*

excess of normal. The third and fourth methods represent more reasonable approaches to the problem of the valuation of goodwill. It should be borne in mind, however, that the goodwill figure which is finally agreed upon by buyer and seller is usually a compromise of judgment, computation, and bargaining. Some corporations write off goodwill either in one lump sum or by periodic charges to surplus over several periods. Goodwill is written off because of the fluctuations in value to which goodwill is subject, and also because of public inclination to discount heavily the valuations placed upon goodwill items in balance sheets. The specific justification generally advanced for write-offs of goodwill is the factor of financial conservatism. Many companies carry goodwill on their books at a nominal valuation of $1.00, including such companies as The Borden Company, Chrysler Corporation, E. R. Squibb & Sons, and F. W. Woolworth Company.

As a matter of sound accounting theory, the investment in true goodwill is a revenue cost of future excess income. Goodwill should be amortized systematically by regular charges to the profit and loss accounts of future accounting periods, i.e., those periods for which excess profits were purchased. For an extended discussion of goodwill accounting, the student is referred to the author's *Intermediate Accounting.*

Leaseholds

A leasehold is a contractual right to the occupancy of specified realty for a stated period of time.

In the ordinary lease agreement, where the contract calls for certain periodic payments of rent, no value should be given to the leasehold for purposes of the balance sheet because no actual investment of capital has been made. If, however, the lessee has paid, say $5,000.00, for the right to occupy property for five years, with no further payment required, it is clear that the expenditure is a payment in advance of the rent for the entire five-year period. The expenditure is an asset, prepaid rent, one fifth of which should be written off each year to Rent Expense, thus:

Rent Expense	1,000.00	
Leasehold (or) Prepaid Rent		1,000.00
To write off 1/5 of leasehold cost against income of this year.		

This accounting represents "straight-line" amortization of the investment in the leasehold. Assuming the original payment to have been made January 1, 1956, the valuation of the leasehold at the end of each accounting period will be

December 31, 1956	$4,000.00
December 31, 1957	3,000.00
December 31, 1958	2,000.00
December 31, 1959	1,000.00
December 31, 1960	0.00

Amortization of the cost of the leasehold is obviously important in the process of properly matching costs against incomes on periodic statements of income.

Assets constructed on leased property by the lessee should be written off in equal annual installments over the period of their commercial life. The maximum write-off period, however, is the period from the date of completion of construction to the date on which the lease expires.

Patents

Patents should be recorded on the books at cost. Cost includes

Purchase price	Fees (attorney and federal)
Developmental expenditures	Cost of legal defense

In so far as developmental costs are concerned, however, the only costs to be capitalized should be those known and identifiable with a patent possessed of a reasonable future earnings potential.

Patents have a definite life of seventeen years without privilege of renewal. They should be amortized by writing off at least 1/17 of their cost each year to the operating account Patents Expense, or Amortization of Patents. However, if a patent has a commercial life of less than seventeen years, the cost of the patent should be written off over the period of its income-producing life. Ideally, and in the interest of fairly matching costs against incomes, the cost of a patent should be written off in ratios equal to the ratios of periodic patent income to total patent income (earned over the commercial life of the patent).

On the balance sheet patents should be carried at cost, less adequate amortization to date. Many companies however, prefer to carry patents at a nominal valuation, like $1.00.

Trade Marks

This asset may be valued at cost to purchase, develop, and successfully defend against legal attacks. Because its legal life is unlimited, a trade-mark is the permanent and exclusive property of its owner. As long as it has earning power, a trade-mark may be valued at its original cost, i.e., without deduction for amortization.

Because the commercial life of a trade-mark is so uncertain and because the amounts involved are generally small, many companies—as a matter of conservatism—do not capitalize expenditures for trade-marks but, instead, write them off to expense. Alternatively, they may carry their trade-marks at a nominal valuation like $1.00. The effect of this accounting upon the financial statements is usually insignificant.

In no case is there warrant for the retention of an accounting valuation for a trade-mark whose commercial value has expired.

LIABILITIES

General Rules of Valuation

Liabilities usually appear in the balance sheet at the cash values of the considerations which will be given to discharge them. To this general rule minor modifications are sometimes made. These modifications, covering such items as accounts payable, bonds payable, and deferred incomes, are discussed in the author's *Intermediate Accounting*.

A balance sheet should include all known liabilities at proper accounting valuations. Liabilities should be classified correctly and a total shown for all of them.

Contingent liabilities should be recognized by short-extending them, or by footnotes to the balance sheet, thus:

> NOTE: At December 31, 19__, the Corporation was contingently liable as guarantor of rentals receivable under leases of dairy equipment assigned to banks in the amount of $2,374,957. The assignments of the leases also include assignments of the Corporation's right, title, and interest in and to the equipment.

Valuation, Net Worth, and Net Income

When capital stock has been issued for overvalued assets, the capital stock of the issuing corporation is said to be "watered stock." The consequences of an action of this kind is an overstatement of the net worth of a business.

More generally, the capital stock of a corporation may be stated to be watered whenever its net worth is overstated. This overstatement may be explained as being due to the fact that maintenance expenditures of the corporation have been stinted, that provisions for depreciation expense were inadequate, that revenue charges have been improperly capitalized or, indeed, that liabilities have been understated or even omitted. Fundamentally, however, defective accounting *valuation* is the cause of any overstatement of the net worth or the net income of a business.

The converse of an overstatement of net worth is an understatement of net worth. When the net worth of a business is understated, the amount of the understatement constitutes a "secret reserve." This understatement may be explained as being due to the fact that certain properties were undervalued when recorded originally; or it may be due to the fact that capital expenditures have been charged to revenue, that provisions for depreciation expense have been excessive, that assets have been written

down too rapidly or, indeed, that liabilities have been overstated. But, again, defective accounting *valuation* is the cause of any understatement of the net worth or the net income of a business.

The history of corporate finance is replete with cases which illustrate overstatements and understatements of net worth. Fundamentally, however, there is no good reason why the net worth and net income of a business should not be stated as accurately as human ability will permit. A fair presentation of net worth and a fair determination of net income are, in turn, dependent upon complete and consistent observance of accepted accounting principles relating to the determination of fair valuations. Thus, again, it may be stated that *valuation* is the heart of financial statements and, further, that *valuation* is *the* constituent element in the proper matching of costs and revenues in fairly determining the periodic net income and net worth of a business.

PROBLEMS

Problem 30–1. On an auditor's count and examination, the cash of Wills & Knox, Inc., was detailed as follows:

Cash account, balance per books, December 31, 19—		$20,796.00
Add Unrecorded and undeposited customers' checks on hand		1,204.00
		$22,000.00
Consisting of:		
Coin and currency in office		$ 500.00
Unrecorded and undeposited customers' checks in office		1,204.00
Recorded and deposited customer's check (John A. Kearny), returned by bank as N.S.F.		432.00
Postage stamps		100.00
Cash advance made to Mr. Robert E. Wills, president of Wills & Knox, Inc., but covered by his check on hand, but dated next April 1		500.00
Balance, per bank statement, December 31, 19—	$21,412.00	
Less Outstanding checks	2,148.00	19,264.00
		$22,000.00

Required

What is the proper value for Cash on the balance sheet? What adjusting entries, if any, should be made?

Problem 30–2. The accounts receivable control account of Hastings & Robbins, Inc., shows a balance of $121,476.09. including a cash advance of $10,000.00 made to the Tyler Electric Company on a contract for $100,000.00 covering special equipment to be manufactured by this company for Hastings & Robbins, Inc., during the next 17 months.

Required

How should the balance of $121,476.09 be classified and valued on the balance sheet?

Problem 30–3. The purchase of a machine was covered by the following invoice:

Machine, model XX-4	$9,000.00
Sales tax, 2%	180.00
	$9,180.00

The purchaser paid freight charges on the machine amounting to $300.00. Installation costs amounted to $880.00. The invoice for the machine was paid for by check after taking a cash discount of 4%.

Required

At what value should this machine be capitalized?

Problem 30–4. The L. C. Coleman Company handles one product only. The following condensed information applies to the calendar year 1958:

Inventory, December 31, 1957:

Quantity	1,500 units
Valuation	$150,000.00 (at cost)
	$135,000.00 (at replacement cost)

Purchases for 1958:

2,000 units @ $ 92.00	= $184,000.00
2,200 units @ $115.00	= $253,000.00
800 units @ $138.00	= $110,400.00
	$547,400.00

Inventory, December 31, 1958:

Quantity	= 1,000 units
Replacement cost per unit	= $140.00

Required

1. Six valuations of inventory at cost.
2. Statement of income for the year ended December 31, 1958. (Sales, $625,000.00; selling and general expenses, $90,000.00.)
3. At what value should the inventory appear on the balance sheet, December 31, 1958?
4. Assume that the replacement cost of the inventory, December 31, 1958, was $110.00 per unit. In this event, how should the two preceding requirements have been answered?

Problem 30–5. The debit side of one of the bond accounts of The Eastern Investment Corporation, an investment trust, appears below:

WILEY CORPORATION 6% BONDS OF 1960

1958	*Par*	*Cost*
Jan. 2	10,000.00	9,500.00
Apr. 1	20,000.00	18,000.00
July 1	50,000.00	40,000.00

On October 1, 1958, the trust sold $50,000.00 par value of these bonds at a price of 85.

Required

1. What entry should be made to record the sale of these bonds?
2. What cost value should be placed on the remaining Wiley Corporation bonds in the company's portfolio?

Problem 30–6. The Elliott-Dern Corporation classified its marketable securities as a part of its working capital. During the past calendar year the company's account with these securities was as follows:

MARKETABLE SECURITIES

	Shares				*Shares*		
Jan. 1	1,000	Delco, Inc.	12,000.00	June 10	500	Delco, Inc.	10,000.00
	800	Lee Drug Co.	40,000.00	July 1	500	Lee Drug Co.	35,000.00
Apr. 10	1,000	Du Barry Radio Co.	20,000.00	Nov. 10	1,000	Du Barry Radio	14,000.00
July 17	200	Lee Drug Co.	12,000.00	20	400	Lee Drug Co.	30,000.00
Oct. 29	1,000	Elliott-Dern Corp.	100,000.00				
Dec. 31	1,500	Delco, Inc.	22,000.00				

The bookkeeper of the Elliott-Dern Corporation debited the Marketable Securities account for the cost of all securities purchased, and credited it with the sales price of all securities sold.

On December 31, 19__, market values were in excess of the cost of all shares remaining in the company's inventory of marketable securities.

Required

1. What entry should be made in order properly to adjust the balance of the Marketable Securities account?
2. How should the securities be classified and valued on the balance sheet, December 31, 19__?

Problem 30–7. The cost of the factory equipment of the James Manufacturing Company was $500,000.00. At a later date the company rearranged the layout of its equipment in order to reduce production costs. The cost of this work of rearrangement was $84,000.00

Required

How should this expenditure be accounted for? How should it be shown in the financial statements?

Problem 30–8. The Office Equipment account of the Coleman Manufacturing Company has a current balance of $24,952.00, and the related Allowance for Depreciation account a balance of $8,160.00.

These balances do not give effect to the following transaction:

Three calculating machines have just been traded in on the cash purchase of three new calculating machines costing $900.00 each. A trade-in allowance of $50.00 was received on each old machine. The old machines were originally purchased at a cost of $800.00 each, had an original estimated life of 5 years, and were actually used for 4½ years.

Required

How should the office equipment account be shown on the balance sheet?

Problem 30–9. The net earnings of the W. T. Nash Company for the past five years have been, successively, $80,220.00, $70,450.00, $85,510.00, $92,690.00, and $80,080.00.

Over these five years the average amount of net capital employed in the business was $750,000.00.

Required

Accepting 8% as a normal rate of return on invested capital, what is a fair value for the goodwill of this company, on a 25% basis?

Problem 30–10. On December 31 of the past calendar year the condensed balance sheet of the Zee Company was

Tangible Assets	$300,000.00	Liabilities	$ 40,000.00
		Common Stock, $100.00 par	200,000.00
		Retained Income	60,000.00
	$300,000.00		$300,000.00

For the past three years, the annual net income of the company has been $22,000.00, $30,000.00, and $26,000.00 respectively. In each of these years, the average net worth of the company has been substantially the amount shown on the condensed balance sheet above.

Required

1. If average annual earnings in excess of an 8% normal rate of return on capital are to be capitalized at 20%, what is a fair value for the goodwill of the Zee Company?

2. If the tangible assets of the company have a present market value of $400,000.00, what value, if any, should be placed on the company's goodwill?

Problem 30–11. The Lowman Company reports the following figures:

	Net Income	*Average Net Worth (Excluding goodwill)*
1952	$ 7,000.00	$100,000.00
1953	15,000.00	100,000.00
1954	12,000.00	106,000.00
1955	6,000.00	110,000.00
1956	7,000.00	109,000.00
1957	11,000.00	115,000.00
1958	16,000.00	120,000.00

The Lowman Company receives favorably a proposal by the Field Company looking toward the purchase of the Lowman Company.

Required

Using a rate of 25%, place an estimate on the value of the goodwill, if any, of the Lowman Company. A normal rate of return in this line of business is 7%.

Problem 30–12. The following items are taken from annual reports of the companies named:

The Borden Company:	
Trade-marks, Patents, and Goodwill	$ 1.00
General Motors Corporation:	
Investments in foreign companies:	
Vauxhall Motors Limited	8,905,686.00
Adam Opel A. G.	1.00
Other	2.00
Goodyear Tire & Rubber Company:	
Goodwill, Patents, and Trade-marks	1.00
May Department Stores Company:	
Furniture, Fixtures, and Equipment	1.00
Delivery Equipment	1.00
Nunn-Bush Shoe Company:	
Lasts, Dies and Patterns, Trade-marks, and Goodwill	1.00
Union Carbide & Carbon Corporation:	
Patents, Trade-marks, and Goodwill	1.00
Westinghouse Electric Corporation:	
Patents, Charters, and Franchises	8.00
F. W. Woolworth Company:	
Goodwill	1.00

Required

Discuss and intelligently criticize the valuation policies which are reflected in the above accounts.

Problem 30–13. Bonwit Teller & Company is a corporation with its principal place of business at 721 Fifth Avenue, New York City. It is a merchandiser of feminine apparel.

For some years the company had been a lessee of a building on the northeast corner of Fifth Avenue and Thirty-eighth Street. In 19__ the company sublet its entire interest in the building to the Primrose Silk Company for a rental substantially more than the amount which Bonwit Teller & Company was obligated to pay to its own lessor.

For arranging this transaction, Bonwit Teller & Company paid a brokerage fee of $20,000.00, and deducted this payment from its income tax return. The deduction, however, was disallowed by the Commissioner of Internal Revenue, who stated that the expenditure should have been capitalized. This ruling was later confirmed by the U. S. Tax Court, which admitted that "the question [was] not free from difficulty."

Required

From an accounting standpoint, do you believe the above expenditure should have been capitalized or debited to expense?

Problem 30–14. For many years Stern Brothers, a department store in New York City, was located on leased property on Twenty-third Street. With the decline of Twenty-third Street as a shopping center the company began to find its own location increasingly less desirable and less profitable; it therefore began to seek a new location for its store. The company eventually obtained a location on Forty-second Street which it found desirable and on which it obtained a lease for twenty years.

The company moved into its Forty-second Street premises about 15 months in advance of the expiration of its lease on Twenty-third Street. The company continued, however, to make the payments which were required by the contract of lease on its old premises. These payments, rent, taxes, and sundry other items, together with $88,072.08 of equipment abandoned at the old location, totaled $520,164.56. This total amount was recorded by the company as a deferred charge to future operations with 10% of this amount being charged off annually thereafter to profit and loss.

Required

1. Should the accounting of Stern Brothers be approved? Why?
2. Does the company's accounting result in fairly setting forth its annual net income?

Problem 30–15. The firm of Worth & Stafford, located on the south water-front district of Seattle, has been engaged in a general marine repair business for many years. Early in 1955 it acquired, through purchase, the business of one of its smaller competitors, the Elliott Marine Repair Works. Worth & Stafford continued the operation of both businesses for the balance of 1955 and well into 1956. In that year, however, the company's volume of business contracted sharply, in common with all other companies in the same line of business.

Because of the unpromising outlook for general business conditions, and also because both its units of plant were operating unprofitably, it was decided in the latter part of 1956 to consolidate all activities in the main Worth & Stafford plant to secure greater operating efficiency. All personal, usable property of the Elliott works was accordingly transferred to the main plant until such time as the Elliott plant could profitably be reopened.

During 1957 and 1958 the building on the Elliott property was used as a garage for the automobile equipment of Worth & Stafford. This conversion involved no new expense to the company.

In the preparation of the December 31, 1958, balance sheet, the question arose as to the proper valuation of the Elliott property on this statement. The land represented an investment of $40,000, and the building, $85,000. Losses of Worth & Stafford had been heavy in both 1957 and

1958, and the outlook for business in 1959 was exceedingly unfavorable. In the opinion of Mr. Stafford it was doubtful if the Elliott property would ever be returned to its former use by Worth & Stafford.

In view of the stagnant market for industrial real estate, sale of the Elliott property was out of the question, except possibly at heavy sacrifice. It was probable, therefore, that the Elliott property would have to be carried as a frozen investment for a long period of time.

It was the expectation of Mr. Stafford that, for lack of other more productive use, the Elliott building would probably be continued in service as a garage for the storage and repair of Worth & Stafford automobiles, although a building for this purpose could have been erected at a cost of not over $25,000.

Required

How should the Elliott property be valued on the December 31, 1958, balance sheet of Worth & Stafford? Explain what new accounting, if any, you would recommend in connection with this valuation.

Chapter 31

INTRODUCTION TO ACCOUNTING THEORY

Introduction

In presenting an introduction to the theory of accounting, i.e., principles of accounting, it is to be observed that the descriptive and expository materials of this and other accounting textbooks—on advanced as well as on elementary levels—are grounded upon generally accepted "principles of accounting." References to the "principles of accounting" in the literature of accounting are legion. These principles of accounting are conspicuously important to the public accountant whose responsibility is that of rendering a professional opinion as to the fairness of a given set of financial statements. In passing upon the fairness of a set of audited financial statements—the product of financial information recorded in the accounts of a business—the independent professional public accountant renders an *opinion*, a standard form of which follows.

> We have examined the balance sheet of X Company as of December 31, 19__, and the related statement(s) of income and retained income for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.
>
> In our opinion, the accompanying balance sheet and statement(s) of income and retained income present fairly the financial position of X Company at December 31, 19__, and the results of its operations for the year then ended, in conformity with *generally accepted accounting principles applied on a basis consistent with that of the preceding year.*

The italicized portion of this opinion should be noted especially. It is important to observe that "principles of accounting" are significantly and specifically emphasized in the *opinion* of the professional public accountant.

It is apparent, then, that the structure of accounting and, indeed, of the profession of accounting proper, is wholly dependent upon those fundamentals which are called the "generally accepted principles of accounting." Broadly speaking, these principles are the assumptions and rules of account-

ing, the methods and procedures of accounting, and the application of these rules, methods, and procedures to the actual practice of accounting. More narrowly, accounting principles are generally accepted rules of human behavior covering what is *right* in an accounting matter.

"Generally Accepted Principles of Accounting"

Conceding the importance of these "principles of accounting" as they relate to the reporting of financial information for the use of managers, owners, creditors, and investors generally, it is fair to ask, What are the generally accepted principles of accounting? Do these principles of accounting appear in a binding codification? What is the authoritative source for these principles?

Surprisingly enough, no codification actually exists of the principles of accounting, although scholarly writings have appeared from time to time dealing in greater or less degree with "principles of accounting." The influence of some of these writings has been substantial. In so far as current literature is concerned, the profession of accounting today appears to give especial weight to the Accounting Research Bulletins of the American Institute of Certified Public Accountants and to the Regulations and Accounting Series releases of the Securities and Exchange Commission. Other authoritative sources are

American Accounting Association (executive committee), *Accounting Concepts and Standards Underlying Corporate Financial Statements*, 1948 revision.

American Institute of Certified Public Accountants, *CPA Handbook* (New York: The Institute, 1953), Vol. II, Chaps. 17–18.

Littleton, A. C., *Structure of Accounting Theory* (American Accounting Association, 1953).

Paton, William A., and A. C. Littleton, *An Introduction to Corporate Accounting Standards* (American Accounting Association, 1940).

Sanders, Thomas H., Henry R. Hatfield, and Underhill Moore, *A Statement of Accounting Principles* (New York: American Institute of Certified Public Accountants, 1938).

"Principles of accounting," actually, are not principles in the sense that these principles have been reduced to scientific fact. The laws of science are based upon repeated observations of a particular kind of physical action or series of actions. Accounting, however, does not rest upon scientific observation of the physical. It actually rests largely upon *expert opinion* relating to what is *right* in an accounting matter. The whole profession of accounting rests on principles of accounting—i.e., accounting conventions, standards, and doctrines—*long tested* in the crucible of accounting experience. Professors Sanders, Hatfield, and Moore have stated the case effectively:

There is, it is believed, a corpus of principles of accounting which are generally accepted. It is true that they are not "written law"; they have not been codified; they must be sought in accounts and financial statements, in treatises, and in other evidences of professional opinion. It is true that they have not been adopted by vote of the profession. But that they have been accepted is evidenced by the common ways of thought and speech which make communication in accounting matters possible, by the generally uniform practice of all accountants when dealing with some situations, by the general agreement that, among all the possible ways of dealing with other situations, only a few can be used with propriety, by the restrictions of controversy in respect of propriety to a relatively small number of situations out of the innumerable number about which disagreement is possible. So fully is the existence of a body of accepted accounting principles recognized that accountants commonly state in their reports and certificates that the statements presented have been prepared "in accordance with accepted principles of accounting."[1]

And Professor Littleton has stated:

If we view the term broadly, theory can properly be called a body of doctrine. It is an area of beliefs, explanations, justifications related to an area of practice.[2]

A particularly important use of theory is that it may provide a basis for examining into trends of change in accounting ideas.[3]

Accounting Conventions

Accounting, as a system, rests upon certain basic assumptions or conventions about the field of private business. These assumptions or conventions are briefly described below.

THE ENTITY CONVENTION For accounting purposes each profit-minded business—be it corporation, partnership, or proprietorship—is looked upon as a distinctive, individualistic, and independent business entity. Accounts are kept for the business as if it were independent and without managerial or proprietary connection with any other business. One man, for example, might own a theater and a radio-television station. The two businesses, however, would be regarded as *separate* entities. A separate set of books would be kept for each business and a separate set of financial reports would be prepared as well. In this way it is possible to determine the economic success of each of these businesses. A partnership or a single-proprietorship business is regarded as a separate business entity even though the owners of these businesses may actually have outside assets and incomes.

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[1] Thomas H. Sanders, Henry R. Hatfield, and Underhill Moore, *A Statement of Accounting Principles* (New York: American Institute of Certified Public Accountants, 1938), p. 5.

[2] A. C. Littleton, *Structure of Accounting Theory* (American Accounting Association, 1953), p. 175.

[3] *Ibid.*, p. 210.

THE CONTINUITY CONVENTION For accounting purposes, each profit-minded business is generally looked upon as a "going concern" i.e., as a continuing enterprise, an enterprise that will continue in business indefinitely. Fixed assets are accounted for on the assumption that they will be productively employed over a period of reasonable service life. Long- and short-term expenses are accounted for by allocating them to accounting periods on the assumption that the owner of these costs will continue to be in business indefinitely. The continuity convention is the reason for using cost or unamortized costs for the valuations of the balance sheet.

CALENDAR OR FISCAL YEAR CONVENTION For accounting purposes, the calendar or fiscal year of twelve months represents the time period generally used for the purpose of determining the amount of net income (or net loss) earned by a business. The use of a calendar or fiscal year is actually a practical business necessity. Owners, managers, creditors, and investors want periodic reports on the progress of a business and usually they want these reports at least annually. It would be obviously impractical to defer the measurement of the net income of a business to the date marking the end of the life of the business.

In using the calendar or fiscal year for the purpose of determining the net income of a business, the actual determination of net income immediately calls into play procedures for the proper allocation of income and expense to each accounting year. From an accounting standpoint, these procedures are obligatory because, if the annual net income of a business is to be fairly stated, there must be a careful periodic allocation and matching of incomes and expenses. Because so many of the transactions of a given business overlap two or more accounting periods, year-end adjusting entries are required in order fairly to allocate incomes and costs between accounting periods and, in particular, to credit a current period only with the incomes earned in that period and to charge it only with the matching costs which have been incurred.

THE VALUATION CONVENTION For accounting purposes, money is accepted as the common unit for evaluating business transactions which affect the balance sheet of a business. There is the tacit assumption that the monetary unit—the dollar in the United States—is a stable unit of exchange. This assumption is made even though it is a well-known fact that the purchasing power of the dollar is actually a variable. Nevertheless, for accounting purposes, all dollars are handled as if they were alike, current dollars appearing in the accounts as the equivalent of current allocations of historical dollars.

Furthermore, by expressing them in dollars, the many diverse transactions and activities of a business can be measured, controlled, and periodically compared, decisions being made on the basis of the dollar

facts reported. Except for the yardstick of dollar measurement, how otherwise could the management of a business decide whether or not to buy or rent property, to mechanize its materials handling operations, to merchandise its products in more than one territory? Answers to questions like these are possible because the diverse elements comprising them are uniformly measurable in dollars.

THE TRANSFERRED COST (OR COST FLOW) CONVENTION This convention simply means that production costs are transferable to the product manufactured. If, in the manufacture of a given product, the cost of the raw materials used was $6,000.00, direct labor, $5,000.00, and manufacturing expenses, $4,000.00, then the cost and value of the finished product is fixed at $15,000.00. Were there also an inventory of work in process, the cost and value of this inventory would be the sum of the costs incurred on the production of this inventory to date. The value, then, of these two inventories for accounting purposes is simply the total of costs incurred to date.

The "transferred cost convention" is the dominant assumption underlying the procedures of cost accounting.

Valuation Should Be at Cost

This is one of the most important of the principles of accounting. For accounting purposes generally, expenditures for assets and expenses should be recorded at their original net cost in dollars. Independent transactions are assumed. Concurrently, for any given accounting period, the costs of that period must be classified as being "capital" or "revenue" in nature. Cost is one of the most important of accounting values, it is one of the most defensible, and it can usually be proven as a historical fact.

Accountants are generally agreed that the recording and write-off of accounting valuations should be on the basis of original cost. They are also agreed that, in matching costs against incomes, these costs should be those expirations of original cost consumed in the earning of current income. The propriety of recording depreciation expense on the basis of the original cost of the depreciable fixed asset is a conspicuous example. On this point, the Committee on Accounting Procedure of the American Institute of Accountants has stated:

> It has been suggested in some quarters that the problem [of depreciation expense and high costs] be met by increasing depreciation charges against current income. The committee does not believe that this is a satisfactory solution at this time. It believes that accounting and financial reporting for general use will best serve their purposes by adhering to the generally accepted concept of depreciation on cost, at least until the dollar is stabilized at some level. An attempt to recognize current prices in providing depreciation, to be consistent, would require the serious step of formally recording appraised current values for all properties, and contin-

uous and consistent depreciation charges based on the new values. Without such formal steps, there would be no objective standard by which to judge the propriety of the amounts of depreciation charges against current income, and the significance of recorded amounts of profit might be seriously impaired.[4]

However, the committee has also stated:

When appreciation has been entered on the books, income should be charged with depreciation computed on the written-up amounts . . . When a company has made representations as to an increased valuation of plant, depreciation accounting and periodic income determination thereafter should be based on such higher amounts.[5]

In order to give effect to the principle of valuation at cost and in order to match costs against revenues, adjusting entries are required to

1. defer some costs to future periods (inventories and prepaid expenses, for example);
2. record the expired portion of expenditures for fixed assets (depreciation and depletion expense, for example); and
3. provide for losses on uncollectible accounts receivable, and the like.

After accounting recognition has been given to the costs chargeable against a current period, the costs involved must be classified and their values apportioned as being directly associated with the product manufactured by a business or, as being not so associated, i.e., distinguishing between product costs and period costs.

It is to be observed that, in giving recognition to the revenue costs of a period, some cost valuations can be determined accurately. Others must be estimated. And some costs involve the selection of specific valuation *methods* like first in first out, last in first out, average cost, and so on, for the purpose of measuring expired costs. In short a valuation *method* must be selected and then used consistently from one accounting period to another.

Income Must Be Realized

For accounting purposes, income must be realized in order to warrant its recognition as being earned. What is the test for recognizing *realized* income? On page 43 it was stated that "in free and independent transactions, the fair cash values of the considerations received for the sale or use of assets and services constitute gross income." Accountants have generally approved the recognition of revenue when an income transaction

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[4] American Institute of Certified Public Accountants, *Accounting Research Bulletin No. 43* (New York: The Institute, 1953), p. 68.

[5] *Ibid.*, p. 73.

has resulted in the acquisition of current assets. Professor Littleton has stated it this way:

> Revenue is recognizable when a sale has been made to a solvent debtor.[6]

and

> *Revenue Recognition:* Objective evidence of services performed and of benefits received in return . . . afford the only acceptable basis for periodically assigning revenue to the present or of alternatively deferring recognition into the future.[7]

Net Income Should Be All-Inclusive

For the purpose of establishing the net income of a business for an accounting period, there is general agreement among accountants that the use of the accrual method of accounting (see page 264) results in the fairest determination of net income.

The net income of a business for an accounting period is the excess of all income earned in that period over the sum of all costs properly allocable to that period. This is the "all-inclusive" concept of net income endorsed by the American Accounting Association (see page 592). The Securities and Exchange Commission has also given its endorsement to this concept of net income: "(a) All items of profit and loss given recognition in the accounts during the period covered by the profit and loss or income statements shall be included."[8]

Subject to some exceptions, the all-inclusive concept of net income is the position of the American Institute of Accountants (see pages 592–593).

Precepts for Financial Statement Reporting

Accountants have generally accepted certain tenets or precepts for the reporting of information on the financial statements of a business. These rules or precepts, very important in the application of accounting principles, are full disclosure, materiality, consistency, and conservatism.

FULL DISCLOSURE Commensurate to his reasonable needs, each reader of a financial statement should be furnished with all data essential to his understanding of the statement. In the setting of an audit—reflecting an auditor's competency and independence—the financial statements of a business should be built upon the policy of "full disclosure."

MATERIALITY All values and facts of *material* financial importance should be disclosed in the financial statements. These values and facts are

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[6] Littleton, *op. cit.*, p. 202.
[7] *Ibid.*, p. 203.
[8] Regulation S-X, Rule 5-03.

inclusive of events subsequent to the date of the balance sheet if they importantly affect a reader's understanding of the financial statements. Examples of such facts are an assessment of additional income taxes or the loss of assets by fire, flood, storm, or explosion.

What is meant by the word "material"? An excellent answer is this:

> A statement, fact, or item is material if, giving full consideration to the surrounding circumstances, as they exist at the time, it is of such a nature that its disclosure, or the method of treating it, would be likely to influence or to "make a difference" in the judgment and conduct of a reasonable person. The same tests apply to such words as significant, consequential, or important.[9]

CONSISTENCY There should be consistency in the use of an accepted principle of accounting from one year to another. This is for the purpose of making financial statements comparable and of preventing the manipulation of net income by the simple procedure of using other accounting methods.

Within the limits of generally accepted principles of accounting there may exist two or more accredited procedures. For example, an inventory may be valued on a first-in first-out, last-in first-out, invoice cost, average cost, or standard cost basis. The important consideration is simply that an accredited principle of accounting, applied to transactions in a given accounting year, be consistent with its application to transactions of the year preceding. The reader of financial statements is interested in knowing, and he is entitled to know, that the values of these statements reflect *consistency*[10] in the proper application of accredited principles of accounting. The importance of this principle of consistency is that, without it, it would be possible to alter financial statements—and their yearly comparability—merely by changing from one accredited method of accounting to another. If a business, for good reason, makes a change of accounting method, the effect of this change upon the financial statements should be disclosed and the effect upon net income revealed. This disclosure should appear in a footnote to the financial statements and in the written opinion of the professional auditor as to the fairness of the financial statements.

CONSERVATISM For many years the doctrine of *conservatism* in accounting was manifested through the use of such phrases as these:

> Never overstate an asset or understate a liability.
> Never overestimate a profit or understate a loss.
> Provide for all losses and anticipate no profits.

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[9] James L. Dohr, *Journal of Accountancy*, 90 (July, 1950), 56.

[10] "Consistency, it will be observed, refers especially to uniformity in practice in two succeeding years, so that the results are truly comparable."—Thomas H. Sanders, "Progress in Development of Basic Concepts," *Contemporary Accounting* (New York: American Institute of Certified Public Accountants, 1945), p. 20.

The general objective of this doctrine of conservatism was that of avoiding any overstatement of the accounting valuations of a business. The doctrine, commendable enough in its basic concept, was abused. Misrepresentation was injected into the balance sheets of businesses by policies involving the deliberate understatement of asset values in order to achieve so-called "conservative" values for these assets. Fixed assets, for example, might be carried at purely nominal valuations.

Today the rule of conservatism is essentially a rule of caution. Income, for example, will be recognized by the accountant only when it has been realized and expenditures only when paid or a liability incurred, whichever is earliest. From the standpoint of the professional, independent auditor, the accounting values of a business should be fair and subject to validation. When the auditor is faced with an alternative valuation—the product of an alternative accredited accounting method—conservatism would dictate a choice in favor of the method yielding the lesser value for an asset or for net income. There should be no misrepresentation, ever. Conservatism should always be grounded in the desire to tell the truth and nothing but the truth. And income should always be *fairly* stated.

Appendix **PRACTICE SETS**

Single Proprietorship	Practice Set No. 1 Practice Set No. 2
Partnership	Practice Set No. 3 Practice Set No. 4
Manufacturing Corporation	Practice Set No. 5 Practice Set No. 6

Six practice sets are presented on pages 692–773. Two sets cover the businesses of single proprietorships, two sets cover partnership businesses, and two sets cover manufacturing corporations operating under job order cost accounting and the plan of perpetual inventory. Practice Set No. 1 may be used alternatively with Practice Set No. 2; for example, one set may be used in the first semester and the other set may be used when the introductory course is repeated in the second semester or second year. Practice Set No. 3, similarly, may be used alternatively with Practice Set No. 4; and Practice Set No. 5 with Practice Set No. 6.

The accounting period for each practice set is two months. However, work on each practice set can be confined to one month should this be necessary or desirable to meet particular classroom conditions. The current year should be used in all dates.

Unless otherwise indicated, sales and purchases of merchandise are on account and are due for payment on the 10th of the month following date of invoice, less cash discounts of 1% for sales and 2% for purchases. Cash sales and cash purchases take regular cash discounts; C.O.D.'s and sight drafts are net, no cash discount. Exceptions from these terms are stated in the text. Unless otherwise stated, "sale" and "purchase" transactions are transactions for the sale and purchase of merchandise, respectively.

PRACTICE SET NO. 1: SINGLE PROPRIETORSHIP

Henry J. Franklin

The following books of original entry will be employed in this practice set: sale book, purchases book, cash receipts book, cash payments book, and journal. The general ledger accounts will be as follows:

Current Assets

Cash
Notes Receivable
Accounts Receivable (control)
Allowance for Bad Debts
William A. Phelps, Travel Advance
Harold W. Spear, Travel Advance
Merchandise Inventory
Prepaid Insurance
Prepaid Interest

Fixed Assets

Office Equipment
Allowance for Depreciation—Office Equipment

Current Liabilities

Accounts Payable (control)
Notes Payable
Withholding Income Taxes Payable
Social Security Taxes Payable

Net Worth

Henry J. Franklin, Capital
Henry J. Franklin, Personal
Profit and Loss

Profit and Loss

Sales
Returned Sales and Allowances
Sales Discounts
Cost of Sales
Purchases
Returned Purchases and Allowances
Purchases Discounts
Freight In
Advertising Expense
Delivery Expense
Sales Salaries
Traveling Expense
Bad Debts Expense

Depreciation Expense—Office Equipment
General Expense
General Salaries
Insurance Expense
Office Supplies Expense
Rent Expense
Social Security Taxes
Utilities Expense (To this account charge bills for water, electricity, gas, and telephone.)
Interest Expense

NOVEMBER 2

Henry J. Franklin began business with an investment of cash, $15,000.00.

Paid rent for the month of November to the Globe Building Company, $300.00.

NOVEMBER 3

Paid the Standard Office Equipment Company for sundry units of office equipment (furniture, safe, filing cabinets, and so on), $2,000.00.

Paid Drake & Stone, Inc., for stationery and sundry office and bookkeeping supplies, $77.12.

Purchased from the Carter Office Machines Company for cash: one typewriter, $250.00, one adding machine, $200.00, and one cash register, $150.00, total, $600.00.

NOVEMBER 4

Purchases from: Bell & Bennett, $178.97.
Clark & Son, $633.92.
Cox & Cox, $612.00.

Paid freight on purchase from Cox & Cox, $10.11.

Paid Bell Telephone Company bill, $12.00.

NOVEMBER 5

Sales to: William E. Boyd, $600.00.
C. H. Brooks & Company, $387.00.

Purchase from F. M. Dent & Company, $601.00.

Paid for postage stamps, $6.00.

NOVEMBER 6

Cash sale to Burley & Son, $737.00, net.

Cash purchase from Cox & Cox, $614.00, less 2%.

Paid Cox & Cox invoice of November 4, $612.00, less 2%.

Paid White & Bollard for one year's fire insurance premium on personal property, $60.00. (Debit Insurance Expense.)

NOVEMBER 7

Sales to: William E. Boyd, $421.00.
C. H. Brooks & Company, $301.00.

Paid general expenses, $24.25.

NOVEMBER 9

Paid Clark & Son invoice of November 4, $633.92, less 2%.

Purchase from Cox & Cox, $1,047.02.

Issued credit memorandum to William E. Boyd for merchandise returned from shipment of November 7, $21.00.

NOVEMBER 10

Cash is received from C. H. Brooks & Company in payment of invoice of November 5, $387.00, net.

Traveling expenses are paid, $48.14.

Paid F. M. Dent & Company invoice of November 5, net, no discount. By mistake, the check was written for $610.00 (instead of $601.00), an overpayment of $9.00.

NOVEMBER 11

Cash sale to William E. Boyd, $648.00, net.

Purchase from F. M. Dent & Company, $310.00, terms 5/10, n/30.

NOVEMBER 12

Sale to D. J. Conley, $826.50, terms net.

Purchase from Bell & Bennett, $565.16.

Invoice is received from Clark & Son covering purchase of merchandise, $560.00, and prepaid freight, $20.00. The freight terms on this purchase of merchandise were f.o.b. shipping point.

Paid general expenses, $30.16.

NOVEMBER 13

Purchase from Bell & Bennett, $1,241.52.

Paid New York Central Railroad for freight bill on Bell & Bennett shipments of November 12 and 13, $17.36.

An advertising bill in favor of the *Empire Daily Times* is paid, $175.10.

NOVEMBER 14

A credit memorandum is received from Bell & Bennett for merchandise returned (from purchase of November 12), $29.62.

A credit memorandum is received from F. M. Dent & Company acknowledging our overpayment of $9.00 on November 10.

The payroll for the first half of the month: sales salaries, $200.00; general salaries, $500.00. Cash of $550.00 is disbursed; $136.00 is withheld from payroll checks to cover deductions for income taxes and $14.00 to cover deductions for social security taxes (O.A.S.I.) of 2%. The payroll is paid today (November 15 is Sunday).

NOVEMBER 16

Sale to Stanwood's, Inc., $788.00. Shipment is made today, sight draft with order bill of lading attached. (Record this transaction in the manner of a sale on account as per common business practice described on pages 227–228.)

Purchase from F. M. Dent & Company, $979.22.

Issued credit memorandum to William E. Boyd for merchandise returned from sale of November 7, $12.10.

NOVEMBER 17

Paid Bell & Bennett invoice of November 4, $178.97, net.
Paid freight on purchase of November 16, $21.16.
Paid traveling expenses, $72.64.
Paid Cox & Cox invoice of November 9, $1,047.02, less 2%.
Sale to William E. Boyd, $684.50.

NOVEMBER 18

Cash is withdrawn by Mr. Franklin for his personal use, $100.00.

Drew check in favor of Clark & Son in payment of balance due on bill of November 12, less 2%.

Sale to D. J. Conley, $1,019.70. Terms, 2/10, 1/20, n/30 and f.o.b. shipping point.

Paid the New York Central Railroad for prepaid freight on the D. J. Conley shipment, $28.26. The prepayment was made as an accommodation to the customer.

NOVEMBER 20

Sale to C. H. Brooks & Company, $640.00.
Purchase from Cox & Cox, $2,096.60.
Paid City Delivery Service, Inc., for delivery expenses, $54.70.

NOVEMBER 21

Paid F. M. Dent & Company invoice of November 11, $310.00, net.

Issued credit memorandum to C. H. Brooks & Company for merchandise returned from sales invoice of November 7, $12.04.

NOVEMBER 23

Sale to Stanwood's, Inc., $347.00.

The Empire National Bank credits our account for collection of our sight draft of November 16 on Stanwood's, Inc., $788.00.

NOVEMBER 24

At our request, a credit memorandum is received from F. M. Dent & Company for cash discount not taken by us on our payment of November 21, $15.50.

Sale to the Raymond Sales Company, $726.15.

Drew check in favor of Bell & Bennett:

$565.16	Invoice November 12
29.62	Credit memorandum November 14
$535.54	
10.71	2% cash discount
$524.83	Amount of check

NOVEMBER 25

Sale to D. J. Conley, $1,219.00.
Purchase from F. M. Dent & Company, $618.17.
Cash purchase from Judson & Ray, Inc., $113.00, less 5%.

NOVEMBER 26

Sale to C. H. Brooks & Company, $471.03.

Drew check in favor of F. M. Dent & Company:

	$979.22	Invoice November 16
	19.58	2% cash discount
	$959.64	
$ 9.00		Credit memorandum November 14
15.50		Credit memorandum November 24
	24.50	
	$935.14	Amount of check

Note: Was the amount of the check calculated correctly? If not, record the check of $935.14 in the cash payments book along with a proper allowance for cash discount.

NOVEMBER 27

Sale to Fraser & Nelson, Inc., $537.14.

Received check from D. J. Conley in payment of our sales invoice of November 18 as follows:

$1,019.70	Merchandise
28.26	Freight
$1,047.96	
20.39	Cash discount: 2% × $1,019.70.
$1,027.57	Amount of check

Issued credit memorandum to D. J. Conley for merchandise returned by him from sale of November 25, $25.25.

NOVEMBER 28

Sales to: D. J. Conley, $874.31, terms net.
Stanwood's, Inc., $211.05.
Howard Coburn & Co., $1,101.04.

Paid City Delivery Service, Inc., for delivery expenses, $140.21.

Paid Empire Public Service Company for electricity and gas bills, $27.40.

NOVEMBER 30

Purchase from Clark & Son, $871.69.

Received a 30-day, noninterest-bearing note, dated today, from William E. Boyd, $987.90. This note covers the balance due on our sales invoices of November 5 and 7.

The payroll for the second half of the month: sales salaries, $400.00; general salaries, $500.00. Cash of $710.00 is disbursed; $172.00 is withheld from payroll checks to cover deductions for income taxes and $18.00 to cover deductions for social security taxes (O.A.S.I.) of 2%.

End-of-the-Month Procedures

Total and post the books of original entry for November. Record the trial balance on an 8-, 10-, or 12-column work sheet. The trial balance should be

Henry J. Franklin

TRIAL BALANCE, NOVEMBER 30, 19__

Cash	$ 7,439.07	
Accounts Receivable	7,901.43	
Notes Receivable	987.90	
Office Equipment	2,600.00	
Accounts Payable		$ 4,827.98
Withholding Income Taxes Payable		308.00
Social Security Taxes Payable		32.00
Henry J. Franklin, Capital		15,000.00
Henry J. Franklin, Personal	100.00	
Sales		12,539.42
Returned Sales and Allowances	70.39	
Sales Discounts	20.39	
Purchases	11,042.27	
Returned Purchases and Allowances		29.62
Purchases Discounts		120.78
Freight In	68.63	
Advertising Expense	175.10	
Delivery Expense	194.91	
Sales Salaries	600.00	
Traveling Expense	120.78	
General Expense	60.41	
General Salaries	1,000.00	
Insurance Expense	60.00	
Office Supplies Expense	77.12	
Rent Expense	300.00	
Utilities Expense	39.40	
	$32,857.80	$32,857.80

Complete the work sheet, giving effect to the following additional information:

1. The provision for bad debts expense for November is estimated at $100.00.
2. Annual depreciation rate on office equipment, 10%.
3. Social security taxes, levied on the employer, on the November payroll:

O.A.S.I. tax, 2%	× $1,600.00 =	$32.00
Unemployment tax, 3%	× $1,600.00 =	48.00
		$80.00

   These are taxes assessed against the employer. They do not include social security taxes withheld from the wage and salary checks of employees.
4. The balance of the Insurance Expense account, $60.00, represents insurance expense, $5.00, and prepaid insurance expense, $55.00.
5. The inventory of merchandise, November 30, 19__, is estimated at $2,000.00.

After the work sheet has been completed, prepare a statement of income for the month of November, 19__, and a balance sheet, November 30,

19__. Schedules showing the reconciliations of control accounts and subsidiary ledgers should accompany the balance sheet.

Reconcile the Cash account with the bank account. The bank statement received from the Empire National Bank, November 30, 19__, was as follows:

	DEBITS				DEPOSITS	BALANCE
Nov. 2					15,000.00	15,000.00
3	300.00					14,700.00
4	2,000.00	77.12	600.00			12,022.88
6	12.00	10.11	6.00		737.00	12,731.77
7	601.72	599.76	60.00			11,470.29
10	621.24	24.25				10,824.80
12	610.00	48.14			1,035.00	11,201.66
16	17.36	175.10	30.16	550.00		10,429.04
19	21.16	178.97	100.00			10,128.91
20	28.26	1,026.08	72.64			9,001.93
23	54.70	568.80	310.00		788.00	8,856.43
27	524.83	107.35				8,224,25
30	140.21	27.40			1,027.57	9,084.21

DECEMBER 1

(New pages should be used for the books of original entry for December.)

Paid rent for the month of December to the Globe Building Company, $300.00.

Checks are drawn for $200.00 each in favor of William A. Phelps and Harold W. Spear, salesmen, as advances for traveling expenses.

DECEMBER 2

Sale to C. H. Brooks & Company, $719.95.

Purchase from Bell & Bennett, $341.00.

Paid freight on this purchase, $8.61.

DECEMBER 3

Received check from C. H. Brooks & Company in payment of invoice of November 26, $471.03, less 1%, or $466.32.

Postage stamps are purchased for cash, $10.00.

Paid $100.00 to the Community Chest Fund.

DECEMBER 4

Sales to: D. J. Conley, $518.13.

Stanwood's, Inc., $425.70.

DECEMBER 5

Paid Bell Telephone Company bill, $15.88.

Merchandise, costing $51.12, is taken from stock by Mr. Franklin for his personal use.

DECEMBER 7

Sale to William E. Boyd, $232.12.

Received check from Fraser & Nelson, Inc., in payment of invoice of November 27, $537.14, less 1%, or $531.77.

C. H. Brooks & Company notifies us of an error in our invoice of December 2. The invoice should have been for $701.95 not $719.95. A credit memorandum is sent to the customer, $18.00.

DECEMBER 8

Purchase from Clark & Son, $196.86.

November 30 statements from creditors are found to be correct. Checks are mailed to these creditors in settlement of all November 30 balances, less 2%. Analysis of the F. M. Dent & Company account shows that its bill of November 5, which we paid net, should have been discounted 2%. This additional cash discount is deducted in today's check.

DECEMBER 9

Sale to Fraser & Nelson, Inc., $402.20.

Cash purchase from J. S. Bache & Company, $32.13, less 5%, or $30.52.

A credit memorandum is received from Bell & Bennett for merchandise returned from purchase of December 2, $44.07.

DECEMBER 10

Sale to Howard Coburn & Company, $381.70.

Purchase from Cox & Cox, $1,258.41.

Paid New York Central Railroad for freight on Cox & Cox purchase, $22.77.

Traveling expenses are paid, $38.10.

DECEMBER 11

Purchase from F. M. Dent & Company, $2,558.40.

Received check, $552.47, from Stanwood's, Inc., in payment of invoices of November 23, $347.00, and November 28, $211.05, total, $558.05, less 1%.

Received a check of $2,836.67 from D. J. Conley in payment of his account, November 30, $2,894.56, less 2%. In recording this check in the cash receipts book, a cash discount of 1% is allowed on sales invoice of November 25; other items are net. A letter is sent to D. J. Conley advising him of the cash discount not allowed.

DECEMBER 12

Sale to William E. Boyd, $660.00.

Paid general expenses, $28.10.

Paid City Delivery Service, Inc., for delivery expenses, $81.00.

DECEMBER 14

Mailed a credit memorandum for $20.00 to William E. Boyd as an allowance on merchandise sold him December 7.

An extra 1% cash discount for payment within 5 days is offered by F. M. Dent & Company on its invoice of December 11. Check is drawn in payment, less 3%.

A check for $372.00 is issued in favor of the Empire National Bank in payment of withholding income taxes, November 30, 19__, $308.00, and O.A.S.I. taxes payable, November 30, 19__, $64.00. This bank is an authorized depositary of the Internal Revenue Service. (Debit Withholding

Income Taxes Payable, $308.00, Social Security Taxes Payable, $32.00, and Social Security Taxes [expense], $32.00.)

DECEMBER 15

Purchase from Bell & Bennett, $1,412.40.

Paid New York Central Railroad for freight on this purchase, $25.62.

Sale to D. J. Conley, $798.77. Freight of $10.88 is prepaid on this invoice, whose freight terms were f.o.b. shipping point.

Funds are borrowed today from the Empire National Bank on our $1,000.00 noninterest-bearing note, dated today, for 60 days. Bank rate, 6%.

The payroll for the first half of the month: sales salaries, $600.00; general salaries, $500.00. Cash of $850.00 is disbursed; $228.00 is withheld from payroll checks to cover deductions for income taxes and $22.00 to cover deductions for social security taxes (O.A.S.I.) of 2%.

DECEMBER 16

Sale to Edgar Ames & Company, shipped C.O.D. express, $49.20.

Purchase from Cox & Cox, $673.20.

Cash of $300.00 and a 30-day noninterest-bearing note of $1,256.62, dated today, are received from William E. Boyd for the balance of his account receivable to date.

DECEMBER 17

Sales to: Fraser & Nelson, Inc., $938.60.
Raymond Sales Company, $211.04.

Received check from C. H. Brooks & Company for the balance of its account, November 30, $928.96, net.

DECEMBER 18

Sale to Harold & Elton, $622.14.

Purchase from Clark & Son, $803.12.

Drew check in favor of Cox & Cox in payment of bill of December 10, $1,258.41, less 2%.

DECEMBER 19

An advertising bill in favor of the *Empire Daily Times* is paid, $160.00.

A bill for prepaid freight is received from Clark & Son, $24.14, covering shipment of December 18. Freight terms on this shipment were f.o.b. shipping point.

DECEMBER 21

Received check of $935.08 from Raymond Sales Company in payment of November 24 invoice, $726.15, net, and December 17, invoice, $211.04, less 1%.

Purchase from F. M. Dent & Company, $2,103.80.

Paid freight on F. M. Dent & Company purchase, $22.48. Freight terms on this purchase were f.o.b. destination.

DECEMBER 22

Cash sale to Burley & Son, $180.00, net.

Cash purchase from Judson & Ray, Inc., $175.00, less 5%.

Paid Drake & Stone, Inc., for sundry office supplies, $40.14.

A 60-day accepted draft, dated December 18, is received from Harold & Elton in settlement of invoice of that date, $622.14.

DECEMBER 23

Sales to: D. J. Conley, $300.10.
Howard Healey, shipped C.O.D. parcel post, $27.70.

Cash is withdrawn by Mr. Franklin for his personal use, $100.00.

DECEMBER 24

Sales to: Harold & Elton, $521.24.
Stanwood's, Inc., $179.17.

Remittance is received today on C.O.D. shipment of December 16, $49.20.

DECEMBER 26

Issued credit memorandum to Raymond Sales Company for merchandise returned from shipment of December 17, $129.72.

Sale to C. H. Brooks & Company, $1,167.12.

Purchase from Cox & Cox, $519.80.

DECEMBER 28

At its request, drew check in favor of the Raymond Sales Company to cover our credit memorandum of December 26. (Deduct 1% cash discount.)

A bill, for prepaid freight, is received from Cox & Cox, $11.00, covering shipment of December 26. Freight terms on this shipment were f.o.b. destination.

DECEMBER 29

Sale to Howard Coburn & Company, $700.85.

Paid Empire Public Service Company for electricity and gas bills, $41.10.

Paid City Delivery Service, Inc., for delivery expenses, $95.94.

DECEMBER 30

William A. Phelps and Harold W. Spear, salesmen, submit their traveling expense reports for December, $123.44 and $119.70, respectively. Checks are received from Mr. Phelps and Mr. Spear for the unexpended portions of their travel advances.

A check of $700.00 is received from William E. Boyd as part payment of his note of November 30, due today. A 10-day extension is given to Mr. Boyd in which to pay the balance of $287.90.

General expenses are paid, $37.44.

DECEMBER 31

Sale to the Raymond Sales Company, $915.80.

The payroll for the second half of the month: sales salaries, $600.00; general salaries, $500.00. Cash of $850.00 is disbursed; $228.00 is withheld from payroll checks to cover deductions for income taxes and $22.00 to cover deductions for social security taxes (O.A.S.I.) of 2%.

End-of-the-Month Procedures

Total and post the books of original entry for December. Record the trial balance on an 8-, 10-, or 12-column work sheet. Complete the work sheet, giving effect to the following additional information:

1. The provision for bad debts expense for December is estimated at $100.00.
2. Annual depreciation rate on office equipment, 10%.
3. Social security taxes, levied on the employer, on the December payroll:

O.A.S.I. tax, 2%	× $2,200.00 =	$ 44.00
Unemployment tax, 3%	× $2,200.00 =	66.00
		$110.00

   These are taxes assessed against the employer. They do not include social security taxes withheld from the wage and salary checks of employees.
4. The balance of the Insurance Expense account, $60.00, represents insurance expense, $10.00, and prepaid insurance expense, $50.00.
5. There is prepaid interest expense on the note payable of December 15.
6. The inventory of merchandise on December 31, 19__, by actual count and valuation at invoice cost, is $6,503.92.
7. Reconcile the Cash account with the bank account. The bank statement received from the Empire National Bank, December 31, 19__, was as follows:

	DEBITS				DEPOSITS	BALANCE
Nov. 30						9,084.21
Dec. 1	935.14	710.00				7,439.07
3	200.00	200.00	300.00		466.32	7,205.39
8	15.88	8.61	10.00		531.77	7,702.67
11	854.26	1,216.69	593.79	2,054.67		2,983.26
12	100.00	30.52	38.10	22.77	3,389.14	6,181.01
14	81.00	28.10				6,071.91
15	372.00				990.00	6,689.91
17	2,481.65	10.88	25.62	850.00	1,228.96	4,550.72
21	1,233.24	160.00				3,157.48
22		166.25	40.14		1,115.08	4,066.17
26	100.00	22.48	128.42		49.20	3,864.47
30	41.10				856.86	4,680.23
31	3.85 (Service charge)					4,676.38

After the work sheet has been completed, prepare a statement of income for the two months ended December 31, 19__ and a balance sheet, December 31, 19__. (The correct value for Cash on this balance sheet is $3,693.00.) Schedules showing the reconciliations of control accounts and subsidiary ledgers should accompany the balance sheet.

Close the books.

PRACTICE SET NO. 2: SINGLE PROPRIETORSHIP

Henry J. Franklin

The following books of original entry will be employed in this practice set: sales book, purchases book, cash receipts book, cash payments book, and journal. The general ledger accounts will be those described on pages 692–693. Terms on sales and purchases of merchandise are stated on page 691.

NOVEMBER 2

Henry J. Franklin began business with an investment of cash, $20,000.00, and merchandise inventory, $5,000.00.

Paid rent for the month of November to the Globe Building Company, $300.00.

NOVEMBER 3

Paid the Standard Office Equipment Company for sundry units of office equipment (furniture, safe, filing cabinets, and so on), $1,900.00.

Paid Drake & Stone, Inc., for stationery and sundry office and bookkeeping supplies, $88.12.

Purchased from the Carter Office Machines Company for cash: two typewriters, $500.00, one adding machine, $250.00, one calculating machine, $200.00, and one cash register, $150.00, total, $1,100.00.

NOVEMBER 4

Purchases from: Bell & Bennett, $214.63.
Clark & Son, $760.50.
Cox & Cox, $762.00.

Paid freight on purchase from Cox & Cox, $22.14.

Paid Bell Telephone Company bill, $19.00.

NOVEMBER 5

Sales to: William E. Boyd, $750.00.
C. H. Brooks & Company, $446.40.

Purchase from F. M. Dent & Company, $712.00.

Paid for postage stamps, $15.00.

NOVEMBER 6

Cash sale to Burley & Son, $884.00, net.

Cash purchase from Cox & Cox, $744.00, less 2%.

Paid Cox & Cox invoice of November 4, $762.00, less 2%.

Paid White & Bollard for one year's fire insurance premium on personal property, $60.00. (Debit Insurance Expense.)

NOVEMBER 7

Sales to: William E. Boyd, $504.80.
C. H. Brooks & Company, $328.40.

Paid general expenses, $40.20.

NOVEMBER 9

Paid Clark & Son invoice of November 4, $760.50, less 2%.

Purchase from Cox & Cox, $1,286.76.

Issued credit memorandum to William E. Boyd for merchandise returned from shipment of November 7, $28.64.

NOVEMBER 10

Cash is received from C. H. Brooks & Company in payment of invoice of November 5, $446.40, net.

Traveling expenses are paid, $64.80.

Paid F. M. Dent & Company invoice of November 5, net, no discount. By mistake, the check was written for $721.00 (instead of $712.00), an overpayment of $9.00.

NOVEMBER 11

Cash sale to William E. Boyd, $784.10, less 1%.

Purchase from F. M. Dent & Company, $380.00, terms net 30 days, no discount.

NOVEMBER 12

Sale to D. J. Conley, $990.81, terms net.

Purchase from Bell & Bennett, $678.20.

Invoice is received from Clark & Son covering purchase of merchandise, $675.00, and prepaid freight, $25.00. The freight terms on this purchase of merchandise were f.o.b. shipping point.

Paid general expense, $50.76.

NOVEMBER 13

Purchase from Bell & Bennett, $648.90.

Paid New York Central Railroad for freight bill on Bell & Bennett shipments of November 12 and 13, $42.74.

An advertising bill in favor of the *Empire Daily Times* is paid, $154.00.

NOVEMBER 14

A credit memorandum is received from Bell & Bennett for merchandise returned (from purchase of November 12), $36.80.

A credit memorandum is received from F. M. Dent & Company acknowledging our overpayment of $9.00 on November 10.

The payroll for the first half of the month: sales salaries, $400.00; general salaries, $600.00. Cash of $785.00 is disbursed; $195.00 is withheld from payroll checks to cover deductions for income taxes and $20.00 to cover deductions for social security taxes (O.A.S.I.) of 2%. The payroll is paid today (November 15 is Sunday).

NOVEMBER 16

Sale to Stanwood's, Inc., $954.80. Shipment is made today, sight draft with order bill of lading attached. (Record this transaction in the manner of a sale on account according to common business practice described on pages 227–228.)

Purchase from F. M. Dent & Company, $1,204.00.

Paid the New York Central Railroad for freight on the F. M. Dent & Company purchase, $25.20.

Issued credit memorandum to William E. Boyd for merchandise returned from sale of November 7, $16.40.

NOVEMBER 17

Paid Bell & Bennett invoice of November 4, $214.63, net.

Paid traveling expenses, $86.10.

Paid Cox & Cox invoice of November 9, $1,286.76, less 2%.

Sale to William E. Boyd, $811.12.

NOVEMBER 18

Sale to D. J. Conley, $1,236.52. Terms, 2/10, 1/20, n/30 and f.o.b. shipping point.

Paid the New York Central Railroad for prepaid freight on the D. J. Conley shipment, $14.20. The prepayment was made as an accommodation to the customer.

Cash is withdrawn by Mr. Franklin for this personal use, $300.00.

Drew check in favor of Clark & Son in payment of balance due on bill of November 12, less 2%.

NOVEMBER 20

Sale to C. H. Brooks & Company, $784.00.

Purchase from Cox & Cox, $1,626.74.

NOVEMBER 21

Paid F. M. Dent & Company invoice of November 11, $380.00, net.

Issued credit memorandum to C. H. Brooks & Company for merchandise returned from sales invoice of November 7, $15.44.

NOVEMBER 23

Sale to Stanwood's, Inc., $428.77.

The Empire National Bank credits our account for collection of our sight draft of November 16 on Stanwood's, Inc., $954.80.

NOVEMBER 24

Negotiations with F. M. Dent & Company for an additional 5% trade discount on their invoice of November 11 for $380.00 have been concluded successfully. A credit memorandum for $19.00 is received from F. M. Dent & Company to cover this discount.

Sale to the Raymond Sales Company, $881.20.

Drew check in favor of Bell & Bennett:

$678.20	Invoice November 12
36.80	Credit memorandum November 14
$641.40	
12.83	2% cash discount
$628.57	Amount of check

NOVEMBER 25

Sale to D. J. Conley, $504.10.

Purchase from F. M. Dent & Company, $742.88.

Cash purchase from Judson & Ray, Inc., $140.00, less 5%.

NOVEMBER 26

Sale to C. H. Brooks & Company, $576.42.

Drew check in favor of F. M. Dent & Company:

	$1,204.00	Invoice November 16
	24.08	2% cash discount
	$1,179.92	
$ 9.00		Credit memorandum November 14
19.00		Credit memorandum November 24
	28.00	
	$1,151.92	Amount of check

Note: Was the amount of the check calculated correctly? If not, record the check of $1,151.92 in the cash payments book along with a proper allowance for cash discount.

NOVEMBER 27

Sale to Fraser & Nelson, Inc., $654.80.

Received check from D. J. Conley in payment of our sales invoice of November 18 as follows:

$1,236.52	Merchandise
24.73	2% cash discount
$1,211.79	
14.20	Prepaid freight
$1,225.99	Amount of check

Issued credit memorandum to D. J. Conley for merchandise returned by him from sale of November 25, $30.01.

NOVEMBER 28

Sales to: D. J. Conley, $968.20, terms net.
Stanwood's, Inc., $264.71.
Howard Coburn & Co., $1,101.04.

Paid City Delivery Service, Inc., for delivery expenses, $156.84.

Paid Empire Public Service Company for electricity and gas bills, $70.01.

NOVEMBER 30

Received a 30-day, noninterest-bearing note, dated today, from William E. Boyd, $1,209.76. This note covers the balance due on our sales invoices of November 5 and 7.

The payroll for the second half of the month: sales salaries, $800.00; general salaries, $600.00. Cash of $1,099.00 is disbursed; $273.00 is withheld from payroll checks to cover deductions for income taxes and $28.00 to cover deductions for social security taxes (O.A.S.I.) of 2%.

End-of-the-Month Procedures

Total and post the books of original entry for November. Record the trial balance on an 8-, 10-, or 12-column work sheet. The trial balance should be

Henry J. Franklin

TRIAL BALANCE, NOVEMBER 30, 19__

Cash	$10,496.53	
Accounts Receivable	8,248.12	
Notes Receivable	1,209.76	
Merchandise Inventory	5,000.00	
Office Equipment	3,000.00	
Accounts Payable		$ 3,018.52
Withholding Income Taxes Payable		468.00
Social Security Taxes Payable		48.00
Henry J. Franklin, Capital		25,000.00
Henry J. Franklin, Personal	300.00	
Sales		13,854.19
Returned Sales and Allowances	90.49	
Sales Discounts	32.57	
Purchases	10,556.61	
Returned Purchases and Allowances		36.80
Purchases Discounts		128.48
Freight In	115.08	
Advertising Expense	154.00	
Delivery Expense	156.84	
Sales Salaries	1,200.00	
Traveling Expense	150.90	
General Expense	105.96	
General Salaries	1,200.00	
Insurance Expense	60.00	
Office Supplies Expense	88.12	
Rent Expense	300.00	
Utilities Expense	89.01	
	$42,553.99	$42,553.99

Complete the work sheet giving effect to the following additional information:

1. The provision for bad debts expense is estimated at 1/2% of net sales (before deductions for sales discounts).
2. Annual depreciation rate on office equipment, 10%.
3. Social security taxes, levied on the employer, on the November payroll;

O.A.S.I. tax, 2%	× $2,400.00 =	$ 48.00
Unemployment tax, 3%	× $2,400.00 =	72.00
		$120.00

These are taxes assessed against the employer. They do not include social security taxes withheld from the wage and salary checks of employees.

4 The balance of the Insurance Expense account, $60.00, represents insurance expense, $5.00, and prepaid insurance expense, $55.00.
5. The inventory of merchandise, November 30, 19__, is estimated at $6,000.00.

After the work sheet has been completed, prepare a statement of income for the month of November, 19__, and a balance sheet, November 30,

19__. Schedules showing the reconciliations of control accounts and subsidiary ledgers should accompany the balance sheet.

Reconcile the Cash account with the bank account. The bank statement received from the Empire National Bank, November 30, 19__, was as follows:

		DEBITS				DEPOSITS	BALANCE
Nov	2					20,000.00	20,000.00
	4	300.00					19,700.00
	5	1,900.00	88.12	1,100.00			16,611.88
	6	22.14	15.00	19.00		884.00	17,439.74
	9	746.76	729.12	60.00	40.20		15,863.66
	11	64.80	721.00	745.29		1,222.66	15,555.23
	16	50.76	42.74	785.00	154.00		14,522.73
	19	25.20	1,261.02	214.63	86.10		12,935.78
	20	300.00	686.50	14.20			11,935.08
	23	380.00				954.80	12,509.88
	27	1,151.92	628.57	133.00		1,225.99	11,822.38
	30	156.84					11,665.54

DECEMBER 1

(New pages should be used for the books of original entry for December.)

Paid rent for the month of December to the Globe Building Company, $300.00.

Checks are drawn for $200.00 each in favor of William A. Phelps and Harold W. Spear, salesmen, as advances for traveling expenses.

DECEMBER 2

Purchase from Bell & Bennett, $410.00.

Paid freight on above purchase, $15.61.

Paid City Delivery Service, Inc., for delivery expenses, $88.99.

DECEMBER 3

Received check from C. H. Brooks & Company for invoice of November 26, $576.42, less 1%, or $570.66.

Postage stamps are purchased for cash, $15.00.

Paid $100.00 to the Salvation Army Christmas Fund.

DECEMBER 4

Sales to: C. H. Brooks & Company, $1,210.80.

D. J. Conley, $621.50.

Stanwood's, Inc., $512.84.

Purchase from F. M. Dent & Company, $1,078.11.

DECEMBER 5

Paid Bell Telephone Company bill, $22.40.

Merchandise, costing $61.17, is taken from stock by Mr. Franklin for his personal use.

DECEMBER 7

Sale to William E. Boyd, $280.46.

Received check from Fraser & Nelson, Inc., $654.80, less 1%, or $648.25, for invoice of November 27.

C. H. Brooks & Company notifies us of an error in our invoice of December 4. The invoice should have been for $1,110.80 not $1,210.80. A credit memorandum is sent to the customer, $100.00.

DECEMBER 8

Purchase from Clark & Son, $246.42.

November 30 statements from creditors are found to be correct. Checks are mailed to these creditors in settlement of all November 30 balances, less 2%. Analysis of the F. M. Dent & Company account shows that its bill of November 5, which we paid net, should have been discounted 2%. This additional cash discount is deducted in today's check.

DECEMBER 9

Sale to Fraser & Nelson, Inc., $500.64.

Cash purchase from J. S. Bache & Company, $140.00, less 5%.

A credit memorandum is received from Bell & Bennett for merchandise returned from purchase of December 2, $24.01.

DECEMBER 10

Sale to Howard Coburn & Company, $3,466.08.

Purchase from Cox & Cox, $1,540.19.

Paid New York Central Railroad for freight on Cox & Cox purchase, $48.33.

Traveling expenses are paid, $86.24.

DECEMBER 11

Purchase from F. M. Dent & Company, $3,091.80.

Received check from Stanwood's, Inc., in payment of balance of account, November 30, $693.48, less 1%, or $686.55.

Received a check of $2,384.44 from D. J. Conley in payment of his account, November 30, $2,433.10, less 2%. In recording this check in the cash receipts book, a cash discount of 1% is allowed on sales invoice of November 25, other items are net. A letter is sent to D. J. Conley advising him of the cash discount not allowed.

DECEMBER 12

Sales: William E. Boyd, $802.00.
C. H. Brooks & Co., $854.28.

Paid general expenses, $66.71.

In order to finance the purchase of a home, Mr. Franklin withdraws $5,000.00 cash from the business.

DECEMBER 14

Mailed a credit memorandum for $20.00 to William E. Boyd as an allowance on merchandise sold in December 7.

An extra 1% cash discount for payment within 5 days is offered by F. M. Dent & Company on its invoice of December 11. Check is drawn in payment, less 3%.

A check for $564.00 is issued in favor of the Empire National Bank in payment of withholding income taxes, November 30, 19__, $468.00, and O.A.S.I. taxes payable, November 30, 19__, $96.00. This bank is an

authorized depositary of the Internal Revenue Service. (Debit Withholding Income Taxes Payable, $468.00, Social Security Taxes Payable, $48.00, Social Security Taxes [expense], $48.00.)

DECEMBER 15

Purchase from Bell & Bennett, $964.72.

Paid New York Central Railroad for freight on this purchase, $29.01.

Sale to D. J. Conley, $985.11. Freight of $28.32 is prepaid on this invoice, whose freight terms were f.o.b. shipping point.

Funds are borrowed today from the Empire National Bank on our $5,000.00 noninterest-bearing note, dated today, for 60 days. Bank rate, 6%.

The payroll for the first half of the month: sales salaries, $1,200.00; general salaries, $600.00. Cash of $1,400.00 is disbursed; $364.00 is withheld from payroll checks to cover deductions for income taxes and $36.00 to cover deductions for social security taxes (O.A.S.I.) of 2%.

DECEMBER 16

Sale to Edgar Ames & Company, shipped C.O.D. express, $164.15.

Purchase from Cox & Cox, $807.84.

Cash of $300.00 and a 30-day noninterest-bearing note of $1,573.58, dated today, are received from William E. Boyd for the balance of his account receivable to date.

DECEMBER 17

Sales to: Fraser & Nelson, Inc., $1,156.32.
Raymond Sales Company, $258.25.

Received check from C. H. Brooks & Company for the balance of its account, November 30, $1,096.96, net.

DECEMBER 18

Sale to Harold & Elton, $746.81.

Purchase from Clark & Son, $973.61.

Drew check in favor of Cox & Cox in payment of bill of December 10, $1,540.19, less 2%.

DECEMBER 19

An advertising bill in favor of the *Empire Daily Times* is paid, $185.00.

A bill for prepaid freight is received from Clark & Son, $30.10, covering shipment of December 18. Freight terms on this shipment were f.o.b. shipping point.

DECEMBER 21

Received check of $1,136.87 from Raymond Sales Company in payment of November 24 invoice, $881.20, net, and December 17 invoice, $258.25, less 1%.

Purchase from F. M. Dent & Company, $1,440.21.

Paid freight on F. M. Dent & Company purchase, $22.48. Freight terms on this purchase were f.o.b. destination.

DECEMBER 22

Cash sale to Burley & Son, $180.00, net.

Cash purchase from Judson & Ray, Inc., $109.60, less 5%.

Paid Drake & Stone, Inc., for sundry office supplies, $56.41.

A 60-day accepted draft, dated December 18, is received from Harold & Elton in settlement of invoice of that date, $746.81.

DECEMBER 23

Sales to: D. J. Conley, $362.99.
Howard Healey, shipped C.O.D. parcel post, $43.24.

Purchase from Bell & Bennett, $740.69.

Cash is withdrawn by Mr. Franklin for his personal use, $100.00.

DECEMBER 24

Sales to: Harold & Elton, $632.94.
Stanwood's, Inc., $220.00.

Remittance is received today on C.O.D. shipment of December 16, $164.15.

DECEMBER 26

Issued credit memorandum to Raymond Sales Company for merchandise returned from shipment of December 17, $151.16.

A bill, for prepaid freight, is received from Bell & Bennett, $38.01, covering shipment of December 23. Freight terms on this shipment were f.o.b. destination.

A check is received from C. H. Brooks & Company to apply on account, $1,000.00, less 1%, or $990.00.

DECEMBER 28

Sale to C. H. Brooks & Company, $564.61.

Purchase from Cox & Cox, $625.07.

At its request, drew check in favor of the Raymond Sales Company to cover our credit memorandum of December 26. (Deduct 1% cash discount.)

DECEMBER 29

Sale to Howard Coburn & Company, $251.12.

Paid Empire Public Service Company for electricity and gas bills, $82.77.

DECEMBER 30

William A. Phelps and Harold W. Spear, salesmen, submit their traveling expense reports for December $123.44 and $119.70, respectively. These expense reports are paid.

Paid general expenses, $55.02.

DECEMBER 31

The payroll for the second half of the month: sales salaries, $1,200.00; general salaries, $600.00. Cash of $1,400.00 is disbursed; $364.00 is withheld from payroll checks to cover deductions for income taxes and $36.00 to cover deductions for social security taxes (O.A.S.I.) of 2%.

End-of-the-Month Procedures

Total and post the books of original entry for December. Record the trial balance on an 8-, 10-, or 12-column work sheet. Complete the work sheet, giving effect to the following additional information:

1. The provision for bad debts expense is estimated at 1% of net sales (before deductions for sales discounts).
2. Annual depreciation rate on office equipment, 10%.
3. Social security taxes, levied on the employer, on the December payroll:

O.A.S.I. tax, 2%	× $3,600.00	=	$ 72.00
Unemployment tax, 3%	× $3,600.00	=	108.00
			$180.00

These are taxes assessed against the employer. They do not include social security taxes withheld from the wage and salary checks of employees.

4. The balance of the Insurance Expense account, $60.00, represents insurance expense, $10.00, and prepaid insurance expense, $50.00.
5. There is prepaid interest expense on the note payable of December 15.
6. A bill, dated December 31, 19__, of the City Delivery Service, Inc., has just been received for delivery services rendered, $100.48. (Credit Accounts Payable.)
7. The inventory of merchandise, December 31, 19__, by actual count and valuation at invoice cost, is $10,359.26.
8. Reconcile the Cash account with the bank account. The bank statement received from the Empire National Bank, December 31, 19__, was as follows:

	DEBITS				DEPOSITS	BALANCE
Nov. 30						11,665.54
Dec. 1	1,099.00	70.01				10,496.53
2	300.00	200.00	200.00			9,796.53
3	88.99	15.61			570.66	10,262.59
6	15.00					10,247.59
7	22.40				648.25	10,873.44
10	100.00	635.92	1,594.21	713.78		7,829.53
13	48.33	133.00			3,070.99	10,719.19
14	66.71	86.24				10,566.24
15	564.00				4,950.00	14,952.24
16	1,400.00					13,552.24
17	2,999.05	29.01	28.32		1,396.96	11,892.82
22	1,509.39				1,136.87	11,520.30
24	22.48	104.12	56.41	100.00		11,237.29
27	185.00	5,000.00			1,334.15	7,386.44
31	243.14	55.02				
		3.86	(Service charge)			7,084.42

After the work sheet has been completed, prepare a statement of income for the two months ended December 31, 19__, and a balance sheet, December 31, 19__. (The correct value for Cash on this balance sheet is $5,452.00.) Schedules showing the reconciliations of control accounts and subsidiary ledgers should accompany the balance sheet.

Close the books.

PRACTICE SET NO. 3: PARTNERSHIP

Franklin & Graham

The partnership of Franklin & Graham was formed on January 1, 19__, for the purpose of continuing and strengthening a business previously operated solely by Henry J. Franklin. The articles of partnership contained, among other things, the following provisions:

1. The capital of each partner shall be $15,000.00. It was mutually agreed that the capital contribution of each partner should be as follows:

Henry J. Franklin:

Cash		$ 6,060.33
Accounts Receivable:		
C. H. Brooks & Company	$1,869.07	
Howard Coburn & Company	582.55	
D. J. Conley	1,673.83	
Fraser & Nelson, Inc	1,340.80	
Harold & Elton	521.24	
Raymond Sales Company	415.80	
Stanwood's, Inc.	604.87	7,008.16
Notes Receivable (noninterest-bearing):		
Nov. 30 William E. Boyd, due January 9, 19__	$ 287.90	
Dec. 16 William E. Boyd, due January 15, 19__	1,256.62	
Dec. 22 Harold & Elton, due February 20, 19__	622.14	2,166.66
Merchandise Inventory		4,874.12
Prepaid Insurance (premium for 10 months on personal property)		50.00
Prepaid Interest (i.e., bank discount on notes payable)		7.50
Office Equipment	$2,280.00	
Less Allowance for Depreciation	190.00	2,090.00
		$22,256.77
Accounts Payable:		
Bell & Bennett	$1,709.33	
Clark & Son	1,024.12	
Cox & Cox	1,193.00	
F. M. Dent & Company	2,081.32	
	$6,007.77	
Notes Payable, dated December 15, due in 60 days, noninterest-bearing	1,000.00	
Withholding Income Taxes Payable	132.00	
Social Security Taxes Payable	117.00	7,256.77
		$15,000.00

William F. Graham:

Cash		$ 2,125.00
Building		15,000.00
Land		3,000.00
		$20,125.00
Mortgage Payable on real estate, due in 10 years, interest at 6% per annum, payable February 1 and August 1	$5,000.00	
Mortgage Interest Payable	125.00	5,125.00
		$15,000.00

2. Partners' salaries shall be Henry J. Franklin, $300.00 per month; William F. Graham, $200.00 per month.
3. In addition to his salary, each partner shall be permitted to make drawings against profits at the rate of $100.00 per month. Drawings in excess of $100.00 per month may be made by mutual consent of the partners.
4. Interest at the rate of 6% per annum shall be allowed on the average balance of each partner's capital account.
5. After allowing for partners' salaries and interest on partners' accounts, the profit and loss ratios of the partners shall be equal.
6. The accounting period shall be the calendar year.

Credit and cash discount terms for sales and purchases are the same as those described on page 691.

The following books of original entry will be employed in this practice set: sales book, returned sales and allowances book, purchases book, returned purchases and allowances book, cash receipts book, cash payments book, and journal. The general ledger accounts will be as follows:

Current Assets

Cash
Marketable Securities
Notes Receivable
Notes Receivable Discounted
Interest Receivable
Accounts Receivable
Allowance for Bad Debts
William A. Phelps, Travel Advance
Harold W. Spear, Travel Advance
Merchandise Inventory
Prepaid Insurance
Prepaid Interest
Prepaid Expenses (Sundry)

Fixed Assets

Delivery Equipment
Allowance for Depreciation—Delivery Equipment
Office Equipment
Allowance for Depreciation—Office Equipment
Building
Allowance for Depreciation—Building
Land

Current Liabilities

Accounts Payable
Notes Payable

Interest Payable
Withholding Income Taxes Payable
Social Security Taxes Payable
Property Taxes Payable

Long-Term Liabilities

Mortgage Payable

Net Worth

Henry J. Franklin, Capital
Henry J. Franklin, Personal
William F. Graham, Capital
William F. Graham, Personal
Profit and Loss
Partners' Salaries

Profit and Loss

Sales
Returned Sales and Allowances
Sales Discounts
Cost of Sales
Purchases
Returned Purchases and Allowances
Purchases Discounts
Freight In
Advertising Expense
Delivery Expense
Depreciation Expense—Delivery Equipment
Miscellaneous Sales Expense
Sales Salaries
Traveling Expense
Bad Debts Expense
Depreciation Expense—Office Equipment
Depreciation Expense—Building
General Expense
General Salaries
Insurance Expense
Office Supplies Expense
Payroll Taxes
Property Taxes
Utilities Expense
Interest Income
Interest Expense

JANUARY 1

The partnership of Franklin & Graham began business with the assets and liabilities described in the partnership agreement (page 713).

JANUARY 2

	Invoice		
Sales to:	#1	William E. Boyd	$872.11
	2	Burley & Son, shipment made today, terms sight draft	825.44
	3	Raymond Sales Company	671.52

Paid Bell Telephone Company bill, check #1, $14.76.
Issued check #2 in payment of bill in favor of White & Bollard for fire insurance premiums on office equipment, 1-year premium, $24.00; and on building, 3-year premium, $194.40; total, $218.40. (Debit Prepaid Insurance.)

JANUARY 4

A freight bill, covering the merchandise shipped to the Raymond Sales Company, January 2, is paid by check #3, $22.60. This merchandise was shipped freight prepaid although it was mutually agreed that buyer and seller would each pay one half of the freight charges.

Checks #4 and #5 are drawn for $200.00 each in favor of William A. Phelps and Harold W. Spear, salesmen, as advances for traveling expenses.

JANUARY 5

Received check from Fraser & Nelson, Inc., in payment of December account, $1,340.80, less 1%, or $1,327.39.

The Harold & Elton 60-day draft (see note receivable, page 713) for $622.14, and dated December 22, is discounted at the Empire National Bank. Bank rate 6%.

JANUARY 6

An advertising bill in favor of the *Empire Daily Times* is paid, check #6, $96.27.

JANUARY 7

Received check from Stanwood's, Inc., in payment of December account, $604.87, less 1%, or $598.82.

Received check from Harold & Elton in payment of December account, $521.24, less 1%, or $516.03.

JANUARY 8

Purchases from:	Bell & Bennett.	$1,011.33
	Clark & Son	1,037.31
	Clark & Son	300.00
	Cox & Cox	1,473.75

Paid rail freight on these purchases, check #7, $55.58. The freight terms on the Clark purchase of $1,037.31 were f.o.b. destination; the freight on this purchase amounted to $12.04.

JANUARY 9

	Invoice		
Sales to:	#4	C. H. Brooks & Company . . .	$ 776.94
	5	D. J. Conley	2,067.74
	6	Harold & Elton	736.04
	7	Stanwood's, Inc.	882.56
	8	Lasser & Co., cash sale	100.14, less 1%

Received cash from William E. Boyd for the balance due on his note of November 30, $287.90.

Statements, December 31, 19__, received from merchandise creditors, are found to be in agreement with our accounts. Checks #8–11 are mailed to creditors in payment of all December accounts, less cash discounts of 2%. All accounts payable balances on December 31 were for merchandise, except for the two following accounts:

CLARK & SON

	Dec. 8	Mdse.	196.86
	18	Mdse.	803.12
	19	Frt.	24.14

F. M. DENT & CO.

Dec. 21	Frt.	22.48	Dec. 4 Mdse. 899.11
			21 Mdse. 1,204.69

JANUARY 11

Received check from C. H. Brooks & Company in payment of December account, $1,869.07, less 1%, or $1,850.38.

Received check from D. J. Conley in payment of December account:

$ 518.13	Invoice for merchandise, December 4
798.77	Invoice for merchandise, December 15, f.o.b. shipping point
10.88	Prepaid freight, December 15
300.10	Invoice for merchandise, December 23
45.95	Cash discount not allowed on remittance of December 11
$1,673.83	
16.74	Cash discount, 1%
$1,657.09	Amount of check

Note: Was the amount of the check calculated correctly? If not, record the check of $1,657.09 in the cash receipts book along with a proper allowance for cash discount.

JANUARY 12

Issued credit memorandum #1 to William E. Boyd for merchandise returned from sale of January 2, $25.60.

Liabilities representing withholding income taxes payable, $132.00, and social security taxes payable, $117.00, December 31, 19__, are paid. Check #12 is issued in favor of the director of internal revenue, $181.70, and check #13 is issued in favor of the state treasurer, $67.30. (Debit With-

holding Income Taxes Payable, $132.00; and Social Security Taxes Payable, $117.00.)

JANUARY 13

The Empire National Bank credits our account for collection of our sight draft of January 2 on Burley & Son, $825.44.

Received credit memorandum from Bell & Bennett for merchandise returned from purchase of January 8, $36.17.

JANUARY 14

Traveling expenses of Mr. Franklin are paid, check #14, $62.71. This is an expense of the business.

Issued check #15 to the Allen State Bank in payment of 10 shares of its common stock, $1,000.00. This was a new bank being organized in the community.

Received check from Howard Coburn & Company in payment of its December account, $582.55, less 1%, or $576.72. The cash discount is not allowed because the discount period expired January 10.

JANUARY 15

Purchases from:	Cox & Cox	$ 384.18
	F. M. Dent & Company	1,099.63

Paid freight on these purchases, check #16, $24.01.

Paid real-estate taxes (relating to the building and land invested in the business by Mr. Graham) for the year ended last December 31, check #17, $601.32.

The payroll for the first half of the month: sales salaries, $700.00; general salaries, $500.00. Checks #18–25 are issued for cash disbursed to employees, $960.00; $216.00 is withheld from these payroll checks to cover deductions for income taxes and $24.00 to cover deductions for social security taxes (O.A.S.I.) of 2%.

JANUARY 16

	Invoice		
Sales to:	#9	Burley & Son (shipment made today, terms sight draft)	$ 725.76
	10	C. G. Watkins (shipment made today, C.O.D. parcel post)	9.19
	11	D. J. Conley	591.07
	12	Fraser & Nelson, Inc.	1,418.29
	13	Stanwood's, Inc.	388.64

JANUARY 18

Received check for $5.73 from Howard Coburn & Company for cash discount not allowed on its remittance of January 14. The check should have been for $5.83. Because the cost of collecting the difference of $0.10 would be more than the collection itself, sales discount is debited $0.10 and the customer credited $5.83.

Received check, $256.62, from William E. Boyd to apply on his note for $1,256.62, due January 15. Mr. Boyd requests, and is granted, an extension until January 25 to make payment of the remaining $1,000.00.

JANUARY 19

Received check, $12.04, from Clark & Son covering freight on our purchase of January 8.

Issued check #26 to William F. Graham for personal use, $100.00.

Paid for postage stamps, check #27, $10.00.

JANUARY 20

Received credit memorandum from Cox & Cox as an allowance on our purchase of January 15, $25.00.

Issue credit memorandum #2 to D. J. Conley for merchandise returned from sale of January 9, $29.08.

Issued credit memorandum #3 to Burley & Son for merchandise returned from sale of January 2, $91.32. Issued check #28 in payment. This merchandise was returned by Burley & Son freight collect; paid this freight bill as our expense, check #29, $5.01.

JANUARY 21

The Empire National Bank credits our account for collection of our sight draft of January 16 on Burley & Son, $725.76.

Stamps in the amount of $0.57 are received from D. J. Conley for the shortage in his remittance of January 11. The stamps are sold to Henry J. Franklin for cash, $0.57.

General expenses are paid, check #30, $46.90.

Paid City Delivery Service, Inc., for delivery expenses, check #31, $97.38.

JANUARY 22

Purchases from:	Bell & Bennett	$1,245.53
	F. M. Dent & Company	1,096.72

Paid freight on these purchases, check #32, $50.08.

JANUARY 23

	Invoice		
Sales to:	#14	William E. Boyd (shipment made today, terms sight draft)	$314.20
	15	D. J. Conley	336.37
	16	Ray & Son, cash sale	362.41, less 1%

JANUARY 25

Received a bill from Clark & Son covering prepaid air express on their $300.00 shipment of January 8, $16.11. Freight terms on this shipment were f.o.b. shipping point.

Received credit memorandum from F. M. Dent & Company for merchandise returned from purchase of January 22, $60.33.

William E. Boyd is unable to make the payment which he had promised to make today for the balance of $1,000.00 due on his note of December 16. A new note for $1,000.00, dated January 15, for 30 days, and carrying interest at the annual rate of 8%, is executed in place of the old note.

JANUARY 26

Paid Drake & Stone, Inc., for sundry office supplies, check #33, $42.01.

Paid Empire Public Service Company for electricity and gas bills, check #34, $88.90.

Issued credit memorandum #4 to C. H. Brooks & Company for merchandise returned from sale of January 9, $27.03.

JANUARY 27

The C.O.D. shipment, $314.20, made to William E. Boyd on January 23, was refused, apparently because of the sight draft attached. Rather than release the goods on open account, Mr. Franklin instructed the railroad to return the shipment. Credit memorandum #5 was issued to cover the returned merchandise, $314.20. (Enter this transaction in the journal as a debit to Sales.)

Transportation charges are paid on the returned Boyd merchandise, Check #35, $22.09.

JANUARY 29

Purchases from:	Bell & Bennett	$817.71
	Clark & Son	840.25
	Cox & Cox	792.35
	Judson & Ray, Inc. (sight draft, honored today)	184.56

Paid freight on these purchases, check #37, $47.20.

JANUARY 30

	Invoice		
Sales to:	#17	Howard Coburn & Company	$1,690.23
	18	Raymond Sales Company	1,552.48
	19	Willis & Gray (shipment made today, C.O.D. express)	147.20
	20	Roy C. Bales, cash sale	388.62, less 1%

Paid freight on the shipment to the Raymond Sales Company, check #38, $36.24. Freight terms on this sale were f.o.b. shipping point.

William A. Phelps and Harold W. Spear, salesmen, submit their traveling expense reports for January, $180.21 and $188.14, respectively. Checks #39–40 are issued to cover.

The payroll for the second half of the month: partners' salaries, $500.00; sales salaries, $700.00; general salaries, $500.00. Partners' salaries are paid by check #41 in favor of Henry J. Franklin, $300.00, and check #42 in favor of William F. Graham, $200.00. Checks #43–50 are issued for cash disbursed to employees, $960.00; $216.00 is withheld from these payroll checks to cover deductions for income taxes and $24.00 to cover deductions for social security taxes (O.A.S.I.) of 2%. (January 31 is Sunday.)

End-of-the-Month Procedures

Total and post the books of original entry for January. Record the trial balance on a work sheet. Complete the work sheet, making proper provision for needed adjustments. The following information relates to some of these adjustments:

1. The provision for bad debts expense is estimated at 1% of net sales (before deductions for sales discounts).
2. Annual depreciation rates: office equipment, 10%; building, 5%.
3. Social security taxes, levied on the employer, on the January payroll:

O.A.S.I. tax, 2%	× $2,400.00 =	$ 48.00
Unemployment tax, 3%	× $2,400.00 =	72.00
		$120.00

   These are taxes assessed against the employer. They do not include social security taxes withheld from the wage and salary checks of employees.
4. The inventory of merchandise, January 31, 19__, is estimated at $6,000.00.

After the work sheet has been completed, prepare a statement of income for the month of January, 19__, and a balance sheet, January 31, 19__. Schedules showing the reconciliations of control accounts and subsidiary ledgers should accompany the balance sheet.

FEBRUARY 1

(New pages should be used for the books of original entry for February.)

Paid interest on the real-estate mortgage, check #51, $150.00.

Issued check in favor of the Hood Motor Sales Company in payment of one Ford delivery truck with special panel body, check #52, $2,160.00.

Paid for automobile license for the balance of the calendar year, check #53, $22.00.

Paid the Central Insurance Agency for a one-year automobile insurance premium, check #54, $72.00.

FEBRUARY 2

Paid Bell Telephone Company bill, check #55, $25.44.

Issued credit memorandum #6 to the Raymond Sales Company for merchandise returned from sale of January 30, $22.40.

Check #56 for $10.00 is mailed in payment of the weekly releases of *Barrett's Analyst* for one month. This is a trial subscription to a service which provides news, trade analyses, statistics, advice, and so on, to its subscribers as an aid in sales planning and administration. The subscription agreement provides that, at the end of one month, the initial payment of $10.00 may be applied as part payment of a year's subscription, $100.00.

FEBRUARY 4

Received postal money order in payment of C.O.D. shipment to C. G. Watkins, January 16, $9.19.

A 7% note, dated January 10, and due February 10, is received from the Raymond Sales Company in payment of its December account, $415.80. The note is immediately discounted at the Empire National Bank. Bank rate 6%.

FEBRUARY 5

Invoice

Sales to:	#21	William E. Boyd	$1,859.97
	22	Howard Healey (shipment made today, C.O.D. parcel post)	31.02
	23	D. J. Conley	884.16
	24	Stanwood's, Inc.	1,000.19

Received a check of $500.00 and a 30-day trade acceptance, $1,359.97, dated today, from William E. Boyd in payment of sales invoice #21.

Paid freight on the shipment to D. J. Conley, check #57, $31.09. Freight terms on this shipment were f.o.b. shipping point.

FEBRUARY 6

Purchases from:	Bell & Bennett	$ 684.92
	Clark & Son	1,041.00
	Cox & Cox	1,069.39
	Judson & Ray, Inc. (sight draft, honored today)	502.00

Paid freight on these purchases, check #59, $58.46.

FEBRUARY 8

Funds are borrowed from the Empire National Bank on our note payable for $5,000.00, dated today, for thirty days, without interest. Bank rate 6%.

Merchandise, costing $104.00, is taken from stock by Mr. Franklin for his personal use.

FEBRUARY 9

Received a check for $2,249.30 from the Raymond Sales Company in payment of balance due on its January account, less credit memorandum of February 2, $22.40, and cash discount, 1%. (*Note:* Was the amount of the check calculated correctly?)

Issued check #60 for $528.00 in favor of the Empire National Bank. This check is in payment of withholding income taxes payable, $432.00, and O.A.S.I. taxes payable, $96.00, January 31, 19__. This bank is a depositary of the Internal Revenue Service. (Debit Withholding Income Taxes Payable, $432.00; Social Security Taxes Payable, $48.00; and Payroll Taxes, $48.00.)

FEBRUARY 10

Received checks in payment of January accounts:

C. H. Brooks & Company	$ 749.91, less 1%, or $ 742.41
Howard Coburn & Company	1,690.23, less 1%, or 1,673.33

Received express money order covering C.O.D. shipment to Willis & Gray, January 30, $147.20.

Statements, January 31, 19__, received from merchandise creditors are found to be in agreement with our accounts. Checks #61–64 are mailed to creditors in payment of all January accounts, less cash discounts of 2% on merchandise.

FEBRUARY 11

Received checks in payment of January accounts:

D. J. Conley	$2,966.10, less 1%, or $2,936.44
Fraser & Nelson, Inc.	1,418.29, less 1%, or $1,404.11
Stanwood's, Inc.	1,271.20, less 1%, or $1,258.49

We are notified by the Empire National Bank that the Raymond Sales Company note of January 10, due February 10, was not paid. Issued check #65 in favor of the bank to take up the note.

Received credit memorandum from Bell & Bennett for a trade discount of 10% omitted from its bill of February 6, $68.49.

FEBRUARY 12

Received, from Harold & Elton, a 60-day note, dated February 10, for $743.40, in payment of sales invoice #6 of January 9, $736.04, and 60 days' prepaid 6% interest, $7.36.

FEBRUARY 13

Issued check #66 to the Empire National Bank in payment of our note payable due today, $1,000.00.

Discounted the Harold & Elton note for $743.40 at the Empire National Bank. Bank rate 6%.

	Invoice		
Sales to:	#25	Burley & Son (shipment made today, terms sight draft)	$ 150.02
	26	Elliott & Mason, cash sale	335.11, less 1%
	27	Fraser & Nelson, Inc.	1,051.23
	28	Harold & Elton	1,325.94
	29	Raymond Sales Company	2,431.77

FEBRUARY 15

The payroll for the first half of the month: sales salaries, $700.00; general salaries, $500.00. Checks #67–73 are issued for cash disbursed to employees, $960.00; $216.00 is withheld from these payroll checks to cover deductions for income taxes and $24.00 to cover deductions for social security taxes (O.A.S.I.) of 2%.

A check for $1,006.67 is received from William E. Boyd in payment of his note (dated January 15), $1,000.00, and interest, $6.67.

FEBRUARY 16

Received from William E. Boyd a 60-day 8% note, dated February 10, for $846.51 in payment of January account.

Traveling expenses of Mr. Franklin are paid, check #74, $44.51.

Postage stamps are purchased, check #75, $15.00.

FEBRUARY 17

The Empire National Bank credits our account for collection of our sight draft of February 13 on Burley & Son, $150.02.

Paid Drake & Stone, Inc., for sundry office supplies, check #76, $33.63.

FEBRUARY 18

Clark & Son draw a draft on us, dated February 12 and due March 10, to cover their invoice of February 6, $1,041.00, less discount of 2%. The draft is accepted.

A credit memorandum is received from Cox & Cox for merchandise returned from purchase of February 6, $33.49.

FEBRUARY 19

Received postal money order in payment of C.O.D. shipment to Howard Healey, February 5, $31.02.

Purchases from:	Clark & Son	$1,222.26
	Cox & Cox	1,208.41
	F. M. Dent & Company	1,239.62
	J. S. Bart & Company (sight draft, honored today)	348.12

Paid freight on these four purchases, check #78, $86.28. The freight terms on the Clark purchase were f.o.b. destination; the freight on this purchase amounted to $24.23.

FEBRUARY 20

Invoice

Sales to:	#30	Edgar Ames & Co. (shipment made today, C.O.D. express)	$ 155.12
	31	C. H. Brooks & Company	1,604.84
	32	Howard Coburn & Company	1,432.27
	33	Fraser & Nelson, Inc.	646.80
	34	E. A. Herrick, cash sale	128.01 (net)

FEBRUARY 22

An advertising bill in favor of the *Empire Daily Times* is paid, check #79, $175.19.

Received bill from Clark & Son for prepaid freight relating to their shipment of February 19, $27.41. This bill was for extra charges incurred on certain invoice items shipped air express at our request.

FEBRUARY 23

Issued credit memorandum #7 to Fraser & Nelson, Inc., $11.56, and #8 to C. H. Brooks & Company, $25.00, for merchandise returned from sales of February 13 and 20, respectively.

General expenses are paid, check #80, $99.29.

The Harold & Elton draft for $622.14, discounted January 5, was due for payment February 20.

FEBRUARY 24

Paid Empire Public Service Company for electricity and gas bills, check #81, $101.01.

A check, dated February 22, for $419.20, is received from the Raymond Sales Company in payment of its note, $415.80, of January 10, due February 10, and dishonored (see check #65, February 11). The check of the Raymond Sales Company includes interest at 7% for 1 month and 12 days.

FEBRUARY 25

Paid the Shell Oil Company for a 50-gallon drum of oil (for the delivery truck), check #82, $54.54.

Burley & Son write in to claim a credit for 1% cash discount on their purchases of January and February. Although Burley & Son have been sold on a sight draft basis, they appear to be developing into an excellent customer. As a goodwill gesture, their claim is allowed, credit memorandum #8 and check #83 issued to cover, cash discount of 1% on the net sales made to Burley & Son in the months of January and February to date:

	Invoice			
#2	January 2		$ 825.44	
9	January 16		725.76	
25	February 13		150.02	
			$1,701.22	
	C/m			
#3	January 20		91.32	$1,609.90

FEBRUARY 26

	Invoice			
Sales to:	#35	Burley & Son	$ 214.60	
	36	D. J. Conley	929.44	
	37	John E. Hamline, cash sale	174.21, less 1%	
Purchases from:		Bell & Bennett	$1,223.48	
		F. M. Dent & Company	1,007.32	

Paid freight on these purchases, check #84, $50.06.

FEBRUARY 27

William A. Phelps and Harold W. Spear, salesmen, submit their traveling expense reports for February, $180.02, and $171.44, respectively. Checks #85–86 are issued to cover.

The payroll for the second half of the month: partners' salaries, $500.00; sales salaries, $800.00; general salaries, $500.00. Partners' salaries are paid by check #87 in favor of Henry J. Franklin, $300.00, and check #88 in favor of William F. Graham, $200.00. Checks #89–97 are issued for cash disbursed to employees, $1,042.00; $232.00 is withheld from these payroll checks to cover deductions for income taxes and $26.00 to cover deductions for social security taxes (O.A.S.I.) of 2%. (February 28 is Sunday.)

End-of-the-Month Procedures

Total and post the books of original entry for February. Record the trial balance on a work sheet. Complete the work sheet, making proper provision for needed adjustments. The following information relates to some of these adjustments:

1. The provision for bad debts expense is estimated at 1% of net sales (before deductions for sales discounts).
2. Annual depreciation rates: delivery equipment, 33⅓%; office equipment, 10%; building, 5%.

3. Social security taxes, levied on the employer, on the February payroll:

O.A.S.I. tax,	2% × $2,500.00	=	$ 50.00
Unemployment tax,	3% × $2,500.00	=	75.00
			$125.00

These are taxes assessed against the employer. They do not include social security taxes withheld from the wage and salary checks of employees.

4. There is on hand an unrecorded and unpaid expense invoice, dated February 26, from the Hood Motor Sales Company for minor service work on the Ford truck, $21.44.
5. The inventory of merchandise, February 28, 19__, by actual count and valuation at invoice cost, is $6,836.38.
6. Office supplies on hand amount to $20.00; and there is on hand a 50-gallon drum of automobile oil, $54.54.

After the work sheet has been completed, prepare a statement of income for the two months ended February 28, 19__, and a balance sheet, February 28, 19__. Schedules showing the reconciliations of control accounts and subsidiary ledgers should accompany the balance sheet.

In view of the fact that Mr. Franklin and Mr. Graham have received and accepted an attractive offer for the purchase of their business, it is decided to close the books, February 28, 19__.

MARCH 1

Effective today, the business of Franklin & Graham is sold to Edison & Fisher, Inc. All assets, except cash, and liabilities are transferred to the corporation for a cash purchase price of $30,000.00.

All cash on hand is disbursed to Mr. Franklin and Mr. Graham by checks #98–99.

PRACTICE SET NO. 4: PARTNERSHIP

Franklin & Graham

The partnership of Franklin & Graham was formed on January 1, 19__, for the purpose of continuing and strengthening a business previously operated solely by Henry J. Franklin. The articles of partnership contained, among other things, the following provisions:

1. The capital of Mr. Franklin was to be $20,000.00 and that of Mr. Graham, $25,000.00. It was mutually agreed that the capital contribution of each partner should be as follows:

Henry J. Franklin:

Cash		$ 4,323.39
U. S. Treasury Bonds of 19__, 3%, interest payable semiannually, January 1 and July 1		5,000.00
Accounts Receivable:		
C. H. Brooks & Company	$1,294.05	
Howard Coburn & Company	717.20	
D. J. Conley	2,031.84	
Fraser & Nelson, Inc.	1,656.96	
Howard & Elton	632.94	
Stanwood's, Inc.	732.84	
	$7,065.83	
Less Allowance for Bad Debts	200.00	6,865.83
Notes Receivable (noninterest-bearing):		
Nov. 30 William E. Boyd, due December 30, 19__	$1,209.76	
Dec. 16 William E. Boyd, due January 15, 19__	1,573.58	
Dec. 18 Harold & Elton, due February 16	746.81	3,530.15
Merchandise Inventory		6,629.91
Prepaid Insurance (premium for 10 months on personal property)		50.00
Prepaid Interest (i.e., bank discount on notes payable)		7.50
Office Equipment	$2,400.00	
Less Allowance for Depreciation	200.00	2,200.00
		$28,606.78
Accounts Payable:		
Bell & Bennett	$2,091.40	
Clark & Son	1,250.13	
Cox & Cox	1,432.91	
F. M. Dent & Company	2,495.84	
	$7,270.28	
Notes Payable, dated December 15, due in 60 days, noninterest-bearing	1,000.00	
Withholding Income Taxes Payable	199.00	
Social Security Taxes Payable	137.50	8,606.78
		$20,000.00

William F. Graham:

Cash		$ 5,125.00
Building		20,000.00
Land		5,000.00
		$30,125.00
Mortgage Payable on real estate, due in 10 years, interest at 6% per annum, payable February 1 and August 1	$5,000.00	
Mortgage Interest Payable	125.00	5,125.00
		$25,000.00

2. Partners' salaries shall be $300.00 per month for each partner.
3. In addition to his salary, each partner shall be permitted to make drawings against profits at the rate of $100.00 per month. Drawings in excess of $100.00 per month may be made by mutual consent of the partners.

4. Interest at the rate of 6% per annum shall be allowed on the average balance of each partner's capital account.
5. After allowing for partners' salaries and interest on partners' accounts, the profit and loss ratios of the partners shall be equal.
6. The accounting period shall be the calendar year.

The following books of original entry will be employed in this practice set: sales book, returned sales and allowances book, purchases book, returned purchases and allowances book, cash receipts book, cash payments book, and journal. The general ledger accounts will be those described on pages 714–715. Terms on sales and purchases of merchandise are stated on page 691.

JANUARY 1

The partnership of Franklin & Graham began business with the assets and liabilities described in the partnership agreement (page 727).

JANUARY 2

	Invoice		
Sales to:	#1	William E. Boyd	$ 755.00
	2	Burley & Son, shipment made today, terms sight draft	1,018.64
	3	Raymond Sales Company	581.86

Paid Bell Telephone Company bill, check #1, $18.00.

Issued check #2 in payment of bill in favor of White & Bollard for fire insurance premiums on office equipment, one-year premium, $30.00; and on building, three-year premium, $252.00, total, $282.00. (Debit Prepaid Insurance.)

JANUARY 4

A freight bill, covering the merchandise shipped to the Raymond Sales Company, January 2, is paid by check #3, $22.60. This merchandise was shipped freight prepaid although it was mutually agreed that buyer and seller would each pay one half of the freight charges.

Checks #4 and #5 are drawn for $200.00 each in favor of William A. Phelps and Harold W. Spear, salesmen, as advances for traveling expenses.

JANUARY 5

Received check from Fraser & Nelson, Inc., in payment of December account, $1,656.96, less 1%, or $1,640.39.

The Harold & Elton 60-day draft (see note receivable, page 727) for $746.81, and dated December 18, is discounted at the Empire National Bank. Bank rate 6%.

JANUARY 6

An advertising bill in favor of the *Empire Daily Times* is paid, check #6, $144.12.

JANUARY 7

Received checks in payment of December accounts:
Stanwood's, Inc., $732.84, less 1%, or $725.51
Harold & Elton, $632.94, less 1%, or $626.61

JANUARY 8

Purchases from:	Bell & Bennett	$1,247.99
	Clark & Son	1,178.18
	Clark & Son	500.00
	Cox & Cox	1,746.47

Paid rail freight on these purchases, check #7, $61.87. The freight terms on the Clark purchase of $1,178.18 were f.o.b. destination; the freight on this purchase amounted to $18.94.

JANUARY 9

		Invoice		
Sales to:	#4	C. H. Brooks & Company	$	909.61
	5	D. J. Conley		2,552.86
	6	Harold & Elton		914.77
	7	Stanwood's, Inc.		1,089.08
	8	Lasser & Co., cash sale		311.20, less 1%

Received cash from William E. Boyd for the balance due on his note of November 30, $1,209.76.

Statements, December 31, 19__, received from merchandise creditors, are found to be in agreement with our accounts. Checks #8–11 are mailed to creditors in payment of all December accounts, less cash discounts of 2%. All accounts payable balances on December 31 were for merchandise, except for the two following accounts:

CLARK & SON

			Dec.	8	Mdse. 246.42
				18	Mdse. 973.61
				19	Frt. 30.10

F. M. DENT & CO.

Dec. 22	Frt.	22.48	Dec.	4	Mdse. 1,078.11
				21	Mdse. 1,440.21

JANUARY 11

Received check from C. H. Brooks & Company in payment of December account, $1,294.05, less 1%, or $1,281.11.

Received check from D. J. Conley in payment of December account:

$ 621.50	Invoice for merchandise, December 4
985.11	Invoice for merchandise, December 15, f.o.b. shipping point
18.32	Prepaid freight, December 15
362.99	Invoice for merchandise, December 23
43.92	Cash discount not allowed on remittance of December 11
$2,031.84	
20.32	Cash discount, 1%
$2,011.52	Amount of check

Note: Was the amount of the check calculated correctly? If not, record the check of $2,011.52 in the cash receipts book along with a proper allowance for cash discount.

JANUARY 12

Issued credit memorandum #1 to William E. Boyd for merchandise returned from sale of January 2, $30.21.

Liabilities representing withholding income taxes payable, $199.00, and social security taxes payable, $137.50, December 31, 19__, are paid. Check #12 is issued in favor of the director of internal revenue, $275.75, and check #13 is issued in favor of the state treasurer, $60.75. (Debit Withholding Income Taxes Payable, $199.00; and Social Security Taxes Payable, $137.50.)

JANUARY 13

The Empire National Bank credits our account for collection of our sight draft of January 2 on Burley & Son, $1,018.64.

Received credit memorandum from Bell & Bennett for merchandise returned from purchase of January 8, $40.02.

JANUARY 14

Traveling expenses of Mr. Franklin are paid, check #14, $84.17. This is an expense of the business.

Issued check #15 to the Allen State Bank in payment of 10 shares of its common stock, $1,000.00. This was a new bank being organized in the community.

Received check from Howard Coburn & Company in payment of its December account, $717.20, less 1%, or $710.03. The cash discount is not allowed because the discount period expired January 10.

JANUARY 15

Purchases from:	Cox & Cox	$ 474.51
	F. M. Dent & Company	1,314.93

Paid freight on these purchases, check #16, $40.23.

Paid real-estate taxes (relating to the building and land invested in the business by Mr. Graham) for the year ended last December 31, check #17, $720.00.

The payroll for the first half of the month: sales salaries, $900.00; general salaries, $500.00. Checks #18–25 are issued for cash disbursed to employees, $1,136.00; $236.00 is withheld from these payroll checks to cover deductions for income taxes and $28.00 to cover deductions for social security taxes (O.A.S.I.) of 2%.

JANUARY 16

	Invoice		
Sales to:	#9	Burley & Son (shipment made today, terms sight draft)	$ 546.22
	10	D. J. Conley	644.11
	11	Fraser & Nelson, Inc.	1,626.93
	12	Stanwood's, Inc.	479.61

JANUARY 18

Received check for $7.00 from Howard Coburn & Company for cash discount not allowed on its remittance of January 14. The check should

have been for $7.17. It is decided, however, to allow the extra $0.17 discount rather than incur the cost of collecting this small item.

Received check, $573.58, from William E. Boyd to apply on his note for $1,573.58, due January 15. Mr. Boyd requests, and is granted, an extension until January 25 to make payment of the remaining $1,000.00.

JANUARY 19

Received check, $18.94, from Clark & Son covering freight on our purchase of January 8.

Issued check #26 to William F. Graham for personal use, $100.00.

Paid for postage stamps and stamped envelopes, check #27, $25.00.

JANUARY 20

Received credit memorandum from Cox & Cox as an allowance on our purchase of January 15, $25.00.

Issued credit memorandum #2 to D. J. Conley for merchandise returned from sale of January 9, $33.56.

Issue credit memorandum #3 to Burley & Son for merchandise returned from sale of January 2, $112.42. Issued check #28 in payment. This merchandise was returned by Burley & Son freight collect; paid this freight bill as our expense, check #29, $5.01.

JANUARY 21

The Empire National Bank credits our account for collection of our sight draft of January 16 on Burley & Son, $546.22.

Stamps in the amount of $0.62 are received from D. J. Conley for the shortage in his remittance of January 11. The stamps are sold to Henry J. Franklin for cash, $0.62.

General expenses are paid, check #30, $60.90.

Paid City Delivery Service, Inc., for delivery expenses, check #31, $119.61.

JANUARY 22

Purchases from:	Bell & Bennett	$1,524.71
	F. M. Dent & Company	3,224.55

Paid freight on these purchases, check #32, $60.08.

JANUARY 23

	Invoice		
Sales to:	#13	William E. Boyd (shipment made today, terms sight draft)	$ 264.32
	14	C. H. Brooks & Company	1,300.04
	15	D. J. Conley	301.70
	16	Ray & Son, cash sale	412.16, less 1%

JANUARY 25

Received a bill from Clark & Son covering prepaid air express on their $500.00 shipment of January 8, $20.16. Freight terms on this shipment were f.o.b. shipping point.

Received credit memorandum from F. M. Dent & Company for merchandise returned from purchase of January 22, $72.56.

William E. Boyd is unable to make the payment which he had promised to make today for the balance of $1,000.00 due on his note of December 16. A new note for $1,000.00, dated January 15, for 30 days, and carrying interest at the annual rate of 8%, is executed in place of the old note.

JANUARY 26

Paid Drake & Stone, Inc., for sundry office supplies, check #33, $44.20.

Paid Empire Public Service Company for electricity and gas bills, check #34, $108.10.

Issued credit memorandum #4 to C. H. Brooks & Company for merchandise returned from sale of January 9, $36.01.

JANUARY 27

The C.O.D. shipment, $264.32, made to William E. Boyd on January 23, was refused, apparently because of the sight draft attached. Rather than release the goods on open account, Mr. Franklin instructed the railroad to return the shipment. Credit memorandum #5 was issued to cover the returned merchandise, $264.32. (Enter this transaction in the journal as a debit to Sales.)

Transportation charges are paid on the returned Boyd merchandise, check #35, $18.21.

JANUARY 29

Purchases from:	Bell & Bennett	$1,009.05
	Clark & Son	1,136.87
	Cox & Cox	954.36
	Judson & Ray, Inc. (sight draft, honored today)	164.00

Paid freight on these purchases, check #37, $54.20.

JANUARY 30

	Invoice		
Sales to:	#17	Howard Coburn & Company	$2,062.36
	18	Raymond Sales Company	1,915.94
	19	Willis & Gay (shipment made today, C.O.D. express)	150.06
	20	Roy C. Bales, cash sale	301.30 (net)

Paid freight on the shipment to the Raymond Sales Company, check #38, $37.01. Freight terms on this sale were f.o.b. shipping point.

William A. Phelps and Harold W. Spear, salesmen, submit their traveling expense reports for January, $184.20 and $155.04, respectively. Checks #39–40 are issued to cover.

The payroll for the second half of the month: partners' salaries, $600.00; sales salaries, $900.00; general salaries, $500.00. Partners' salaries are paid by check #41 in favor of Henry J. Franklin, $300.00, and check #42 in favor of William F. Graham, $300.00. Checks #43–50 are issued for cash disbursed to employees, $1,136.00; $236.00 is withheld from these payroll

checks to cover deductions for income taxes and $28.00 to cover deductions for social security taxes (O.A.S.I.) of 2%. (January 31 is Sunday.)

End-of-the-Month Procedures

Total and post the books of original entry for January. Record the trial balance on a work sheet. Complete the work sheet, making proper provision for needed adjustments. The following information relates to some of these adjustments:

1. The provision for bad debts expense is estimated at 1% of net sales (before deductions for sales discounts).
2. Annual depreciation rates: office equipment, 10%, building, 5%.
3. Social security taxes, levied on the employer, on the January payroll:

O.A.S.I. tax,	2% × $2,800.00	=	$ 56.00
Unemployment tax,	3% × $2,800.00	=	84.00
			$140.00

These are taxes assessed against the employer. They do not include social security taxes withheld from the wage and salary checks of employees.

4. The inventory of merchandise, January 31, 19__, is estimated at $9,000.00.

After the work sheet has been completed, prepare a statement of income for the month of January, 19__, and a balance sheet, January 31, 19__. Schedules showing the reconciliations of control accounts and subsidiary ledgers should accompany the balance sheet.

FEBRUARY 1

(New pages should be used for the books of original entry for February.)

Paid interest on the real-estate mortgage, check #51, $150.00.

Issued check in favor of the Hood Motor Sales Company in payment of one Ford delivery truck with special panel body, check #52, $2,415.96.

Paid for automobile license for the balance of the calendar year, check #53, $22.00.

Paid the Central Insurance Agency for a one-year automobile insurance premium, check #54, $84.00.

FEBRUARY 2

Paid Bell Telephone Company bill, check #55, $21.01.

Issued credit memorandum #6 to the Raymond Sales Company for merchandise returned from sale of January 30, $27.48.

Check #56 for $10.00 is mailed in payment of the weekly releases of *Barrett's Analyst* for one month. This is a trial subscription to a service which provides news, trade analyses, statistics, advice, and so on, to its subscribers as an aid in sales planning and administration. The subscription agreement provides that, at the end of one month, the initial payment of $10.00 may be applied as part payment of a year's subscription, $100.00.

FEBRUARY 4

Received express money order in payment of C.O.D. shipment to Willis & Gray, January 30, $150.06.

Merchandise, costing $88.00, is taken from stock by Mr. Franklin for his personal use.

FEBRUARY 5

	Invoice		
Sales to:	#21	William E. Boyd	$1,820.80
	22	Howard Healey (shipment made today, C.O.D. parcel post)	88.28
	23	D. J. Conley	1,103.96
	24	Stanwood's, Inc.	1,202.94

Received a check of $500.00 and a 30-day trade acceptance, $1,320.80, dated today, from William E. Boyd in payment of sales invoice #21.

Paid freight on the shipment to D. J. Conley, check #57, $33.62. Freight terms on this sale were f.o.b. shipping point.

FEBRUARY 6

Purchases from:	Bell & Bennett	$ 871.64
	Clark & Son	807.34
	Cox & Cox	1,285.39
	Judson & Ray, Inc. (sight draft, honored today)	725.00

Paid freight on these purchases, check #59, $67.27.

FEBRUARY 8

Funds are borrowed from the Empire National Bank on our note payable for $5,000.00, dated today, for 30 days, without interest. Bank rate 6%.

Issued check #60 for $584.00 in favor of the Empire National Bank. This check is in payment of withholding income taxes payable and O.A.S.I. taxes payable, January 31, 19__. The bank is a depositary of the Internal Revenue Service. (Debit Withholding Income Taxes Payable, $472.00; Social Security Taxes Payable, $56.00; and Payroll Taxes, $56.00.)

FEBRUARY 9

A check, $624.35, is received from the Raymond Sales Company in payment of invoice #3, $581.86, freight bills of January 4 and 30 for $11.30 and $37.01, respectively, total $630.17, less cash discount, $5.82, or net, $624.35.

A 6% note for $1,888.46, dated today, and due March 10, is received from the Raymond Sales Company in payment of the balance of their account, as of February 2. The note is immediately discounted at the Empire National Bank. Bank rate 6%.

FEBRUARY 10

Received checks in payment of January accounts:

C. H. Brooks & Company	$2,173.64, less 1%, or $2,151.90
Howard Coburn & Company	2,062.36, less 1%, or 2,041.74

Statements, January 31, 19__, received from merchandise creditors are found to be in agreement with our accounts. Checks #61–64 are mailed to creditors in payment of all January accounts, less cash discounts of 2% on merchandise.

FEBRUARY 11

Received checks in payment of January accounts:

D. J. Conley	$3,465.11, less 1%, or $3,430.46
Fraser & Nelson, Inc.	$1,626.93, less 1%, or $1,610.66
Stanwood's, Inc.	$1,568.69, less 1%, or $1,553.00

Paid Chamber of Commerce dues, check #65, $50.00

FEBRUARY 12

Received, from Harold & Elton, a 60-day note, dated February 10, for $923.92, in payment of sales invoice #6 (January 9), $914.77 and 60 days' prepaid 6% interest, $9.15.

FEBRUARY 13

Issued check #66 to the Empire National Bank in payment of our note payable due today, $1,000.00.

Discounted the Harold & Elton note for $923.92 at the Empire National Bank. Bank rate 6%.

	Invoice			
Sales to:	#25	Burley & Son (shipment made today, terms sight draft)	$ 190.17	
	26	Elliott & Mason, cash sale	539.32	(net)
	27	Fraser & Nelson, Inc.	1,298.24	
	28	Harold & Elton	1,707.73	
	29	Raymond Sales Company	838.51	

FEBRUARY 15

The payroll for the first half of the month: sales salaries, $1,000.00; general salaries, $500.00. Checks #67–73 are issued for cash disbursed to employees, $1,210.00; $260.00 is withheld from these payroll checks to cover deductions for income taxes and $30.00 to cover deductions for social security taxes (O.A.S.I.) of 2%.

A check for $1,006.67 is received from William E. Boyd in payment of his note (dated January 15), $1,000.00, and interest, $6.67.

FEBRUARY 16

Received from William E. Boyd a 60-day 8% note, dated February 10, for $724.79 in payment of January account.

Traveling expenses of Mr. Franklin are paid, check #74, $51.17.

Postage stamps are purchased, check #75, $15.00.

FEBRUARY 17

The Empire National Bank credits our account for collection of our sight draft of February 13 on Burley & Son, $190.17.

Paid Drake & Stone, Inc., for sundry office supplies, check #76, $44.26.

FEBRUARY 18

Clark & Son draw a draft on us for #791.19, dated February 12 and due March 10, to cover their invoice of February 6, $807.34, less discount of 2%. The draft is accepted.

A credit memorandum is received from Cox & Cox for merchandise returned from purchase of February 6, $33.49.

FEBRUARY 19

Received postal money order in payment of C.O.D. shipment to Howard Healey, February 5, $88.28.

Purchases from:	Clark & Son	$1,480.95
	Cox & Cox	1,504.81
	F. M. Dent & Company	2,040.61
	J. S. Bart & Company (sight draft, honored today)	364.40 (net)

Paid freight on these four purchases, check #78, $88.11. The freight terms on the Clark purchase were f.o.b. destination; the freight on this purchase amounted to $25.23.

FEBRUARY 20

Invoice

Sales to:	#30	Edgar Ames & Co. (shipment made today C.O.D. express)	$ 168.41
	31	C. H. Brooks & Company	2,569.28
	32	Howard Coburn & Company	1,527.54
	33	Fraser & Nelson, Inc.	983.09
	34	E. A. Herrick, cash sale	361.15 (net)

FEBRUARY 22

An advertising bill in favor of the *Empire Daily Times* is paid, check #79, $104.00.

The Harold & Elton draft for $746.81, discounted January 5, was due for payment February 16.

FEBRUARY 23

Issued credit memorandum #7 to Fraser & Nelson, Inc. for a trade discount of 10% inadvertently omitted from sales invoice #33, $98.31.

Issued credit memorandum #8 to C. H. Brooks & Company, $25.11, for merchandise returned from sale of February 20.

General expenses are paid, check #80, $90.82.

FEBRUARY 24

Paid Empire Public Service Company for electricity and gas bills, check #81, $109.11.

Issued check #82, $96.72, to the Hood Motor Sales Company in payment of repairs to the personal car of William F. Graham. The car had been damaged in an accident.

FEBRUARY 25

Paid the Shell Oil Company for a 50-gallon drum of oil (for the delivery truck), check #83, $62.12.

Burley & Son write in to claim a credit for 1% cash discount on their purchases of January and February. Although Burley & Son have been sold on a sight draft basis, they appear to be developing into an excellent customer. As a goodwill gesture, their claim is allowed, credit memorandum #8 and check #84 issued to cover, cash discount of 1% on the net sales made to Burley & Son in the months of January and February to date:

Invoice			
#2	January 2	$1,018.64	
16	January 16	546.22	
25	February 13	190.17	
		$1,755.03	
C/m			
#3	January 20	112.42	$1,642.61

FEBRUARY 26

	Invoice			
Sales to:	#35	Burley & Son	$ 464.25	
	36	D. J. Conley	1,140.95	
	37	John E. Hamline, cash sale	174.21	(net)
Purchases from:		Bell & Bennett	$1,572.07	
		F. M. Dent & Company	1,243.03	

Paid freight on these purchases, check #85, $40.24.

FEBRUARY 27

William A. Phelps and Harold W. Spear, salesmen, submit their traveling expense reports for February, $180.02, and $171.44, respectively. Checks are received from Mr. Phelps and Mr. Spear for the unexpended portions of their travel advances.

The payroll for the second half of the month: partners' salaries, $600.00; sales salaries, $1,000.00; general salaries, $500.00. Partners' salaries are paid by checks #86–87 in favor of Mr. Franklin and Mr. Graham. Checks #88–96 are issued for cash disbursed to employees, $1,210.00; $260.00 is withheld from these payroll checks to cover deductions for income taxes and $30.00 to cover deductions for social security taxes (O.A.S.I.) of 2%. (February 28 is Sunday.)

End-of-the-Month Procedures

Total and post the books of original entry for February. Record the trial balance on a work sheet. Complete the work sheet, making proper provision for needed adjustments. The following information relates to some of these adjustments:

1. The provision for bad debts expense is estimated at 1% of net sales (before deductions for sales discounts).
2. Annual depreciation rates: delivery equipment, 33⅓%; office equipment, 10%; building, 5%.
3. Social security taxes, levied on the employer, on the February payroll:

O.A.S.I. tax,	2% × 3,000.00 =	$ 60.00
Unemployment tax,	3% × $3,000.00 =	90.00
		$150.00

These are taxes assessed against the employer. They do not include social security taxes withheld from the wage and salary checks of employees.

4. There is on hand an unrecorded and unpaid expense invoice, dated February 26, from the City Delivery Service, Inc., for delivery services rendered, $22.12. There is also on hand an unrecorded and unpaid expense invoice, dated February 28, from John C. Leonard, certified public accountant, for accounting services rendered, $100.00.
5. The inventory of merchandise, February 28, 19__, by actual count and valuation at invoice cost, is $10,859.69.
6. Office supplies on hand amount to $25.00; and there is on hand a 50-gallon drum of automobile oil, $62.12.

After the work sheet has been completed, prepare a statement of income for the two months ended February 28, 19__, and a balance sheet, February 28, 19__. Schedules showing the reconciliations of control accounts and subsidiary ledgers should accompany the balance sheet.

PRACTICE SET NO. 5: MANUFACTURING CORPORATION

Blackwell Manufacturing Company, Inc.

The partnership of Blackstock & Wellman was a manufacturing business with a history of many years of successful operation. The partners decided to incorporate their business under the name of the Blackwell Manufacturing Company, Inc. Using a new set of books, the corporation commenced business as of January 1, 19__. The authorized capital stock of the new corporation was as follows:

Preferred stock, $100.00 par:	7%, cumulative, 2,500 shares
Common stock, $100.00 par:	10,000 shares

Common stock was subscribed for at par as follows:

	Shares
Robert S. Allen	500
James D. Blackstock	4,000
Sumner H. Wellman	3,500
	8,000

The subscription of Robert S. Allen was paid in cash, $50,000.00. The subscriptions of Mr. Blackstock and Mr. Wellman were paid for by transferring to the corporation the net assets of the partnership, December 31,

19__, goodwill of $50,000.00, and additional cash of $17,013.54. The total cash received in payment of the subscriptions of Mr. Blackstock and Mr. Wellman was $107,473.69 (excluding petty cash of $100.00).

The balance sheet of the partnership, December 31, 19__, was as follows:

Blackstock & Wellman

BALANCE SHEET, DECEMBER 31, 19__

Assets

Current Assets:		
Cash		$ 90,460.15
Petty Cash		100.00
Notes Receivable	$ 42,357.12	
Less Notes Receivable Discounted	22,848.08	19,509.04
Accounts Receivable	$220,416.44	
Less Allowance for Bad Debts	18,223.17	202,193.27
Inventories:		
Finished Goods	$192,800.37	
Work in Process	65,014.92	
Raw Materials	109,207.46	
Factory Supplies	2,914.66	369,937.41
		$682,199.87

Fixed Assets:

	Gross Value	*Allowance for Depreciation*	*Net Book Value*	
Automobiles	$ 26,089.06	$ 8,128.17	$ 17,960.89	
Buildings	122,010.40	31,722.70	90,287.70	
Furniture, Fixtures, and Office Equipment	12,412.84	3,044.28	9,368.56	
Machinery	137,880.62	38,954.10	98,926.52	
Tools	6,272.14		6,272.14	
Land	40,320.00		40,320.00	
	$344,985.06	$81,849.25	$263,135.81	263,135.81
				$945,335.68

Liabilities and Capital

Current Liabilities:		
Withholding Income Taxes Payable		$ 9,874,16
Social Security Taxes Payable		16,653.96
Interest Payable—Mortgage		1,500.00
Interest Payable—Notes Payable		500.00
Notes Payable		100,000.00
Accounts Payable		83,821.10
		$212,349.22
Long-Term Liabilities:		
Mortgage Payable on real estate, 6%, due in 10 years, interest payable January 1 and July 1		50,000.00
		$262,349.22
Capital:		

	P & L Ratio		
James E. Blackstock, Capital	60%	$360,571.90	
Sumner H. Wellman, Capital	40%	322,414.56	682,986.46
			$945,335.68

Supporting schedules to the above balance sheet are

NOTES RECEIVABLE

Date of Note	*Maker*	*Time*	*Rate of Interest*	*Amount*	*Discounted at Metropolitan National Bank on*
Dec. 1	Eastern Sales Company	120 days	6%	$22,848.08	Dec. 1
10	Carsten & Earles	30 days		11,376.93	
24	Lewis & Son	60 days		8,132.11	
				$42,357.12	

ACCOUNTS RECEIVABLE

Berg & Evans	$ 16,481.47
Carsten & Earles	12,232.87
Clemson Bros., Inc.	26,407.25
Dean, Witter & Company	66,865.28
Elliott & Company, Inc.	32,491.12
General Sales Company, Inc.	14,684.99
Harper-Harris Company	29,238.74
Lewis & Son	22,014.72
	$220,416.44

NOTES PAYABLE

Date of Note	*Payee*	*Time*	*Rate of Interest*	*Amount*
Dec. 1	Metropolitan National Bank	120 days	6%	$100,000.00

ACCOUNTS PAYABLE

Ne Page & Nelson	$12,014.70
Pioneer Supply Company	10,626.09
Rex Metal Works	14,016.72
Sears-Scott, Inc.	8,482.77
Terminal Sales Company	16,422.64
Union Hardware Company	10,418.29
Wallace Equipment Company	11,839.89
	$83,821.10

The following books of original entry are to be employed:

Sales book
Returned sales and allowances book
Voucher register
Cash receipts book
Check register
Notes receivable register
Journal

The Blackwell Manufacturing Company, Inc., adopted the following numbered system of accounts:

BALANCE SHEET ACCOUNTS

ASSETS

1: Cash
2: Petty Cash

5: Notes Receivable
6: Notes Receivable Discounted
7: Accounts Receivable
8: Allowance for Bad Debts
10: Finished Goods
20: Work in Process
25: Raw Materials
30: Factory Supplies

40: Interest Receivable
46: Prepaid Insurance
47: Prepaid Taxes, Licenses, Fees

50: Sundry Salesmen—Travel Advances

61: Automobiles
62: Allowance for Depreciation—Automobiles
63: Buildings
64: Allowance for Depreciation—Buildings
65: Furniture, Fixtures, and Office Equipment
66: Allowance for Depreciation—Furniture, Fixtures, and Office Equipment
69: Land
71: Machinery
72: Allowance for Depreciation—Machinery
75: Tools
76: Allowance for Depreciation—Tools
80: Goodwill
90: Organization Expense

LIABILITIES AND NET WORTH

100: Income Taxes Payable
101: Withholding Income Taxes Payable
103: Property Taxes Payable
105: Social Security Taxes Payable
107: Taxes Payable—Miscellaneous
110: Dividends Payable—Preferred Stock
111: Dividends Payable—Common Stock

130: Interest Payable—Mortgage
131: Interest Payable—Notes Payable
132: Notes Payable

140: Vouchers Payable

181: Mortgage Payable on Real Estate

200: Preferred Stock
225: Common Stock
250: Paid-in Surplus
275: Retained Income
299: Profit and Loss

PROFIT AND LOSS ACCOUNTS

OPERATING INCOME

300: Sales
325: Returned Sales and Allowances
330: Sales Discounts
350: Cost of Sales

MANUFACTURING

450: Freight In
475: Purchases Discounts

501: Direct Labor

600: Manufacturing Expense (summary account)
601: Manufacturing Expense Applied
610: Depreciation Expense—Buildings
612: Depreciation Expense—Machinery
613: Depreciation Expense—Tools
620: Factory Repairs
640: Factory Supplies
650: Heat, Light, Power
660: Indirect Labor
670: Insurance Expense
680: Miscellaneous Factory Expense
688: Social Security Taxes
689: Taxes, Licenses, Fees

SELLING EXPENSES

701: Advertising
720: Delivery Expense
730: Depreciation Expense—Automobiles
750: Insurance Expense
760: Miscellaneous Selling Expense
780: Sales Salaries
788: Social Security Taxes
789: Taxes, Licenses, Fees
790: Traveling Expense

GENERAL EXPENSES

801: Administrative Salaries
810: Bad Debts Expense
820: Depreciation Expense—Buildings
821: Depreciation Expense—Furniture, Fixtures, and Office Equipment
830: Insurance Expense
840: Miscellaneous General Expense
850: Office Supplies

860: Postage
870: Stationery and Printing
888: Social Security Taxes
889: Taxes, Licenses, Fees
894: Telephone and Telegraph

OTHER INCOME

925: Interest Income
950: Miscellaneous Income
975: Scrap Sales

OTHER EXPENSE

1025: Interest Expense
1050: Miscellaneous Expense

SPECIAL INCOME CREDITS: 1100–1199

1150: Adjustment, Bad Debts Expense—Prior Years

SPECIAL INCOME DEBITS: 1200–1299

PROVISION FOR INCOME TAXES: 1300

JANUARY 1

Before the transactions below are recorded, the sale of 8,000 shares of common stock should be placed on the books from information recited above. Include cash in the journal entry recording the investments of Mr. Blackstock and Mr. Wellman. Fixed assets should be recorded at gross values; and accrued depreciation as of December 31, 19__, should be credited to allowance for depreciation accounts.

The accounts payable, in addition to being entered in the opening journal entry (as vouchers payable), should also be entered in the voucher register, beginning with Ne Page & Nelson as voucher #1, Pioneer Supply Company as voucher #2, and so on. The seven credits to Vouchers Payable should be offset by a single debit to account No. 140, Vouchers Payable, in the sundry distribution columns.

Balances for the eight accounts receivable accounts should be entered in customers' accounts in the subsidiary ledger.

The three notes receivable should be entered as memoranda in the notes receivable register.

The books of the Blackwell Manufacturing Company are to be kept on the monthly accrual basis of accounting, as described in Chapters 12, 13, and 23, adjusting entries being recorded on the books at the end of each month. The company expects to operate under a job order system of cost accounting and its inventories are to be maintained under the system of perpetual inventory.

Two controlling accounts are to be carried, one for accounts receivable and one for vouchers payable.

JANUARY 2

Voucher #8, favor James E. Blackstock, for organization expenses paid by him, $4,203.72. Drew check #1 in payment.

Voucher #9, favor state treasurer, for automobile license plates for next 12 months, $500.04. Drew check #2 in payment.

Voucher #10, in favor of sundry salesmen, for traveling advances, $1,200.00. Drew checks #3–9 in payment.

Voucher #11, favor John E. Davis, for six months' interest on mortgage, due today, $1,500.00. Drew check #10 in payment.

Voucher #12, favor General Insurance Agency, for insurance premiums on

Building (three years)	$1,920.00
Inventories (one year)	2,520.00
Automobiles (one year)	408.00
Other personal property (one year)	1,200.00
	$6,048.00

JANUARY 3

Voucher #13, favor Bell Telephone Company, $37.50.

Voucher #14, favor Standard Office Supply Company, for office supplies, $308.08.

Voucher #15, favor Adams & Buckner, for miscellaneous selling expenses, $111.04.

Voucher #16, favor Pioneer Supply Company, for factory supplies, $906.98.

JANUARY 5

Voucher #17, favor Central Service Machinery Company, for factory repairs, $983.68.

Voucher #18, favor Sears-Scott, Inc., for raw-material purchases, $12,010.17.

Voucher #19, favor Northern Pacific Railway, for freight on purchases, $112.14.

Check #11 to pay voucher #19.

Check #12 to pay voucher #12.

Check #13 to pay voucher #13.

JANUARY 6

	Invoice			*Cost*
Sales to:	#1	Berg & Evans	$10,723.26	$9,014.75
	2	Carsten & Earles	7,903,67	6,728.52
	3	Dean, Witter & Company	6,990.47	5,766.29
	4	Elliott & Company, Inc.	9,048.17	7,680.94
	5	Harper-Harris Company	8,164.29	6,722.50

JANUARY 8

Voucher #20, favor Grebe & Gillette, for miscellaneous general expenses, $74.92.

Voucher #21, favor Chase & Chase, for miscellaneous factory expenses, $529.28.

JANUARY 9

Statements, December 31, 19__, received from creditors are found to be correct. Checks #14–20 are drawn in payment:

Voucher		
#1	Ne Page & Nelson	$12,014.70, less 2%, or $11,774.41
2	Pioneer Supply Company	10,626.09, less 2%, or $10,413.57
3	Rex Metal Works	14,016.72, less 2%, or $13,736.39
4	Sears-Scott, Inc.	8,482.77, less 3%, or $ 8,228.29
5	Terminal Sales Company	16,422.64, less 2%, or 16,094.19
6	Union Hardware Company	10,418.29, less 2%, or 10,209.92
7	Wallace Equipment Company	11,839.89, less 1%, or 11,721.49

Received from Harper-Harris Company, note dated January 10, for 30 days, 6% interest, in payment of December account $29,238.74.

JANUARY 10

Voucher #22, favor Pioneer Supply Company, for factory supplies, $1,008.12.

Received cash from Carsten & Earles for note of December 10 due today, $11,376.93.

Received checks in payment of December accounts receivable:

Berg & Evans	$16,481.47, less 2%, or $16,151.84
Clemson Bros., Inc.	26,407.25, less 2%, or 25,879.10
Dean, Witter & Company	66,865.28, less 2%, or 65,527.97
General Sales Company	14,684.99, less 2%, or 14,391.29
Lewis & Son	22,014.72, less 2%, or 21,574.43

JANUARY 11

Voucher #23, favor Wallace Equipment Company, for miscellaneous factory expenses, $432.96.

Check #21 to pay voucher #15.

Check #22 to pay voucher #17.

JANUARY 12

Issued credit memoranda for merchandise returned from sales of January 6:

			Cost
#1	Elliott & Company, Inc.	$1,260.52	$1,109.54
#2	Berg & Evans	783.84	650.16

Raw-material purchases from

Ne Page & Nelson	$12,517.89
Terminal Sales Company	13,062.91

Voucher #26, favor Northern Pacific Railway for freight on raw-material purchases, $184.13.

Check #23 to pay voucher #26.

JANUARY 13

	Invoice			*Cost*
Sales to:	#6	Clemson Bros., Inc.	$ 4,728.72	$ 4,019.32
	7	Dean, Witter & Company	9,583.72	8,126.17
	8	General Sales Company, Inc.	10,284.63	8,741.93
	9	Lewis & Son	12,379.07	10,922.20

JANUARY 15

Voucher #27, favor *Garfield Trade Register*, for advertising, $1,001.18.

Voucher #28, favor city treasurer, for fine imposed on one of our drivers for speeding, $50.00.

Check #24 to pay voucher #28.

JANUARY 16

Received credit memorandum from Terminal Sales Company for raw materials returned from purchase of January 12, $607.49.

Received from Elliott & Company, Inc., check for $20,000.000; and note for $12,491.12, dated January 10, for 30 days, without interest, in payment of December account.

JANUARY 17

Voucher #30, in favor of Payroll, for payroll for period January 1–15, inclusive. Two days are required for the preparation of the payroll; its distribution is as follows:

501	Direct Labor	$12,011.50
620	Factory Repairs	869.14
650	Heat, Light, Power	152.00
660	Indirect Labor	6,126.23
680	Miscellaneous Factory Expense	591.14
720	Delivery Expense	427.82
780	Sales Salaries	760.00
801	Administrative Salaries	1,315.00
		$22,252.83

From this payroll there were required to be withheld from employees' checks income taxes of $3,804.11 and social security taxes (O.A.S.I.) of $445.06.

Drew check #25, in favor of Payroll—Blackwell Manufacturing Company, Inc., in payment of voucher #30.

JANUARY 18

Voucher #31, favor Lowman, Rand, Inc., for miscellaneous selling expenses, $130.44.

Issued credit memorandum #3 to Lewis & Son for merchandise returned from sale of January 13, $817.47. Cost, $677.88.

JANUARY 19

Raw-material purchases from

Rex Metal Works	$35,949.34
Sears-Scott, Inc.	10,432.08

Voucher #34, favor Northern Pacific Railway, for freight on purchases, $317.21.

Check #26 to pay voucher #34.

JANUARY 20

	Invoice			*Cost*
Sales to:	$10	Berg & Evans	$ 6,472.15	$ 5,601.32
	11	Carsten & Earles	9,672.70	8,142.79
	12	Dean, Witter & Company	12,005.94	10,216.04
	13	Elliott & Company, Inc.	7,214.92	6,122.86
	14	Lewis & Son	7,069.99	6,009.22

JANUARY 22

Voucher #35, favor Metropolitan Auto Service, Inc., for automobile repairs, $62.41.

Voucher #36, favor Moody & Jackson, for stationery and printing, $386.73.

JANUARY 23

Voucher #37, favor Pioneer Supply Company, for factory supplies, $1,117.33.

Voucher #38, favor Northern Pacific Railway, for freight on the Pioneer purchase, $20.36.

Voucher #39, favor George H. Mason Company, for miscellaneous general expense, $153.66.

Check #27 to pay voucher #38.

JANUARY 24

Received credit memorandum from Sears-Scott, Inc., for raw materials returned from purchase of January 19, $697.10.

Voucher #41, favor Central Service Machinery Company, for factory repairs, $788.07.

JANUARY 25

Issued credit memorandum #4 to Lewis & Son for merchandise returned from sale of January 13, $569.33. Cost, $467.84.

Voucher #42, favor Union Hardware Company, for miscellaneous factory expense, $601.24.

JANUARY 26

Raw-material purchase from Ne Page & Nelson, $7,687.16.

Voucher #44, favor Northern Pacific Railway, for freight on raw-material purchases, $139.66.

Check #28 to pay voucher #27.

Check #29 to pay voucher #36.

Check #30 to pay voucher #41.

Check #31 to pay voucher #44.

JANUARY 27

	Invoice			*Cost*
Sales to:	#15	Berg & Evans	$7,294.16	$6,200.03
	16	Carsten & Earles	9,589.04	8,169.76
	17	Dean, Witter & Company	8,001.12	6,810.10
	18	Elliott & Company, Inc.	9,588.20	7,903.38

JANUARY 29

Received from Harper-Harris Company, note dated January 11, due March 11, for $8,164.29, without interest, in payment of invoice of January 6.

Voucher #45, favor city treasurer, for gas, electricity, and water, $1,461.52. Charge 4/5 to factory, 1/5 to general administrative expense.

JANUARY 30

Voucher #46, favor *Garfield Trade Register*, for advertising, $1,487.44.

Voucher #47, favor Sterling Oil Company, for gasoline and oil, $362.90.

JANUARY 31

Voucher #48, in favor of sundry salesmen, for traveling expense reports, $684.99.

Voucher #49, favor Western Union Telegraph Company, $129.46.

Voucher #50, favor Harris C. Graham, Cashier, to reimburse petty cash as follows:

760	Miscellaneous Selling Expense	$14.02
790	Traveling Expense	9.18
840	Miscellaneous General Expense	12.59
850	Office Supplies	4.83
860	Postage	15.00
870	Stationery and Printing	16.00
		$71.62

The voucher register is kept open until the summary of the payroll for the period January 16–31 is ready. The payroll voucher, #51, is distributed as follows:

501	Direct Labor	$19,460.46
620	Factory Repairs	1,260.74
650	Heat, Light, Power	152.00
660	Indirect Labor	9,202.37
680	Miscellaneous Factory Expense	527.28
720	Delivery Expense	501.05
780	Sales Salaries	760.00
801	Administrative Salaries	1,315.00
		$33,178.90

From this payroll there were required to be withheld from employees' checks income taxes of $5,206.17 and social security taxes (O.A.S.I.) of $663.58.

Checks #32–38 to pay voucher #48.

Check #39 to pay voucher #50.

Liabilities representing withholding income taxes payable, $9,874.16, and social security taxes payable, $16,653.96, December 31, 19__, are paid. Issued voucher #52 and check #40 in favor of the director of internal revenue, $13,161.55; and voucher #53 and check #41 in favor of the state treasurer, $13,366.57. The check in favor of the state treasurer represents unemployment taxes relating to the payroll for the year ended December 31, 19__; it is 90% × $14,851.74, or $13,366.57.

End-of-the-Month Procedures

Adjusting entries should be placed on the books to record the information and directives described below.

1. Depreciation expense. Annual depreciation rates are

Automobiles	30%
Buildings	3
Furniture, Fixtures, and Office Equipment	10
Machinery	10
Tools	33⅓

   Depreciation expense on the building is to be allocated as being factory expense, 90%, and general administrative expense, 10%.
2. Property taxes. Property taxes for the past calendar year were $6,500.64. Property taxes are to be allocated as being factory expense, 7/8, and general administrative expense, 1/8.
3. Social security taxes, levied on the employer, on the January payroll:

O.A.S.I. tax,	2% × $55,431.73 =	$1,108.63
Unemployment tax,	3% × $55,431.73 =	1,662.95
		$2,771.58

   Payroll taxes are to be allocated as being manufacturing expense, selling expense, and general expense, in proportion to the distribution of the January payroll over the classifications of manufacturing, selling, and general expense, respectively.
4. Write off January apportionment of prepaid automobile license expense.
5. Accrue for interest on notes receivable.
6. Accrue for interest on notes payable and the real-estate mortgage.
7. Expired insurance. Allocate insurance expense on
   Buildings: manufacturing, 90%; general administrative, 10%.
   Inventory: manufacturing, 50%; general administrative, 50%.
   Other personal property: manufacturing, 90%; general administrative, 10%.
8. Transfer the balances of accounts No. 450, Freight In, and No. 475, Purchases Discounts, to account No. 25, Raw Materials.
9. The raw-materials requisition register for January shows a total of $87,407.24 of raw materials requisitioned for use in manufacturing operations. Debit account No. 20, Work in Process, credit account No. 25, Raw Materials.

(*Note:* In the stores ledger, separate accounts are maintained for Freight In and Purchases Discounts. The Freight In account is credited monthly for the amount of freight applicable to raw materials issued; and Purchases Discounts is debited for an amount which will reduce this account to zero at the end of the month. The credit to Freight In and the debit to Purchases Discounts are included in the total of $87,407.24 for the raw-materials requisition register.)

10. The factory supplies requisition register for January shows a total of $3,092.91 of factory supplies requisitioned for use in manufacturing operations. Debit account No. 640, Factory Supplies, credit account No. 30, Factory Supplies.
11. Transfer the balance of account No. 501, Direct Labor, $31,471.96, to account No. 20, Work in Process.
12. Manufacturing expense has been charged to production orders at the rate of 95% of direct labor cost. The summary of manufacturing expense distributed for January shows a total of $29,898.36. This total is checked and found correct, i.e., 95% × $31,471.96 = $29,898.36. Debit account No. 20, Work in Process, credit account No. 601, Manufacturing Expense Applied.
13. The summary of completed production orders for January shows a total of $137,043.26. Debit account No. 10, Finished Goods, credit account No. 20, Work in Process.
14. Total and post all books of original entry. The Cost of Sales column in the sales book should be posted as a debit to account No. 350, Cost of Sales, and as a credit to account No. 10, Finished Goods.
15. Prepare a trial balance, January 31, 19__.

Prepare a statement of income for the month ended January 31, 19__, and a balance sheet, January 31, 19__. These financial statements should include provisions for income taxes. Income taxes are estimated as being approximately 50% of the company's net profit from operations. In the financial statements, however, income taxes should appear at a value which has been rounded off to the nearest hundred-dollar value.

Supporting schedules for accounts receivable and vouchers payable should accompany the balance sheet.

FEBRUARY 1

(In the entry of transactions for August, use new pages for the books of original entry.)

Voucher #54, favor Bell Telephone Company, $54.11.

Voucher #55, favor Moody & Jackson, for printing office and factory forms, $150.00. Apportion 2/3 to factory, 1/3 to general administrative expense.

FEBRUARY 2

Voucher #56, favor Chase & Chase, for miscellaneous factory expenses, $412.01.

Voucher #57, favor Belmont & Keen, for miscellaneous general expenses, $174.16.

Check #42 to pay voucher #51.

FEBRUARY 3

Raw-material purchases from

Ne Page & Nelson	$16,472.81
Terminal Sales Company	8,852.19

Voucher #60, favor Northern Pacific Railway, for freight on purchases, $156.72.

Check #43 to pay voucher #60.

FEBRUARY 4

	Invoice			*Cost*
Sales to:	#19	Berg & Evans	$ 8,352.14	$6,280.40
	20	Clemson Bros., Inc.	10,322.40	8,825.04
	21	Dean, Witter & Company	9,843.04	7,576.29
	22	Harper-Harris Company	7,943.50	6,584.19

FEBRUARY 6

Check #44 to pay voucher #54.

Voucher #61, favor Central Service Machinery Company, for factory repairs, $188.52.

FEBRUARY 7

Issued credit memorandum #5 to Clemson Bros., Inc., for merchandise returned from sale of February 4, $919.25. Cost, $772.36.

Voucher #62, favor Pioneer Supply Company, for factory supplies, $801.04.

FEBRUARY 8

Received from Harper-Harris Company note dated February 4, and due March 10, for $7,943.50, without interest, in payment of invoice of February 4.

Voucher #63, favor *Garfield Trade Register*, for advertising, $1,266.47.

FEBRUARY 9

Statements, January 31, received from creditors are found to be correct. Checks are drawn in payment as follows:

Check #	*To pay Voucher #*	*Amount of Check*
45	14	$ 308.08
46	16, 22, 37, all less 2%	2,971.78
47	18, 40, both less 1%	21,527.70
48	20	74.92
49	21	529.28
50	23	432.96
51	24, 43, both less 2%	19,800.95
52	29, less 2%	12,206.31
53	31	130.44
54	32, less 2%	35,230.35
55	35	62.41
56	39	153.66
57	42, less 2%	589.22
48	45	1,461.52
59	46	1,487.44
60	47	362.90
61	49	129.46

A check, $29,384.93, is received from Harper-Harris Company in payment of its note of January 10, $29,238.74, and 6% interest.

Cash is received from Elliott & Company, Inc., in payment of its note of January 10, $12,491.12.

FEBRUARY 10

Received checks in payment of January accounts:

Berg & Evans	$23,705.73, less 2%, or	$23,231.62
Carsten & Earles, for December account	12,232,87, net	
Clemson Bros., Inc.	4,728.72, less 2%, or	4,634.15
Dean, Witter & Company	36,581.25, less 2%, or	35,849.62
Elliott & Company, Inc.	24,590.77, net	
General Sales Company, Inc.	10,284.63, less 2%, or	10,078.94
Lewis & Son	18,062.26, less 2%, or	17,701.01

Raw-material purchase from Ne Page & Nelson, $8,001.99.

Voucher #65, favor Northern Pacific Railway, for freight on purchases, $141.04.

Check #62 to pay voucher #65.

Voucher #66 and check #63 in favor of the Metropolitan National Bank, $11,227.55, in payment of withholding income taxes, January 31, 19__, $9,010.28; and O.A.S.I. taxes payable, January 31, 19__, $2,217.27. This bank is an authorized depositary of the Internal Revenue Service.

FEBRUARY 11

	Invoice			*Cost*
Sales to:	#23	Carsten & Earles	$ 6,517.84	$ 5,561.15
	24	Dean, Witter & Company	12,614.32	10,709.17
	25	Elliott & Company, Inc.	10,613.24	6,499.25
	26	General Sales Company, Inc.	8,294.73	5,351.15
	27	Harper-Harris Company	11,642.16	9,889.46

Voucher #67, favor Northern Pacific Railway, $81.02. By agreement this freight bill is to be paid by Harper-Harris Company, for whose account the payment is made by check #64.

FEBRUARY 13

Received credit memorandum from Ne Page & Nelson for raw materials returned from purchase of February 10, $768.46.

Terminal Sales Company offers 1% extra discount on its bill of February 3 if payment is made within 10 days. Check #65 to pay voucher #59, less 3%, or $8,586.62.

FEBRUARY 14

Voucher #69, favor Lowman, Rand, Inc., for miscellaneous selling expenses, $121.19.

Credit is requested by, and granted to, Elliott & Company, Inc., for 2% sales discount on its remittance of February 10 for $24,590.77. Credit memorandum #6.

Check #66 to pay voucher #62, net.

FEBRUARY 15

Voucher #70, favor Pioneer Supply Company, for factory supplies, $837.91.

Voucher #71, favor Northern Pacific Railway for freight on Pioneer purchase, $18.77.

Check #67 to pay voucher #71.

FEBRUARY 16

Issued credit memorandum #7 to Elliott & Company, Inc., for merchandise returned from sale of February 11, $205.52. Cost, $173.54.

Voucher #72, favor Wallace Equipment Company, for miscellaneous factory expenses, $444.15.

FEBRUARY 17

Raw-material purchases from

Rex Metal Works	$26,432.07
Sears-Scott, Inc.	19,392.73

Voucher #75, favor Northern Pacific Railway, for freight on purchases, $301.18.

Voucher #76, in favor of Payroll for payroll for period February 1–15, inclusive. Its distribution is as follows:

501	Direct Labor	$15,483.07
620	Factory Repairs	362.17
650	Heat, Light, Power	152.00
660	Indirect Labor	6,366.90
680	Miscellaneous Factory Expense	614.08
720	Delivery Expense	449.16
780	Sales Salaries	760.00
801	Administrative Salaries	1,400.00
		$25,587.38

From this payroll there were required to be withheld from employees' checks income taxes of $4,347.56 and social security taxes (O.A.S.I.) of $511.75.

Check #68 to pay voucher #75.

Check #69 to pay voucher #76.

FEBRUARY 18

	Invoice			*Cost*
Sales to:	#28	Berg & Evans	$ 9,796.02	$ 8,182.52
	29	Clemson Bros., Inc.	8,928.36	7,641.10
	30	Elliott & Company	10,356.92	6,065.98
	31	Harper-Harris Company	9,429.58	8,074.24
	32	General Sales Company, Inc., shipment made today, terms sight draft	12,152.16	10,829.34

FEBRUARY 20

Received an accepted 30-day time draft from Carsten & Earles for $6,517.84, without interest, dated February 11, covering our shipment of that date.

Voucher #77, favor Moody & Jackson for promotional sales catalogs, $400.00.

Voucher #78, favor Carr & Wright, for miscellaneous general expenses, $82.64.

FEBRUARY 21

Check #70 to pay voucher #63.

Issued credit memorandum #8 to Berg & Evans for merchandise returned from sale of February 18, $534.28. Cost, $425.28.

Voucher #79, favor Central Service Machinery Company, for factory repairs, $584.32.

FEBRUARY 22

Voucher #80, favor Union Hardware Company, for miscellaneous factory expense, $401.57.

Voucher #81, favor Standard Office Supply Company, for office supplies, $277.28.

FEBRUARY 23

Voucher #82, favor *Garfield Trade Register*, for advertising, $1,082.26.

Collected cash on sight draft shipment of February 18 to the General Sales Company, Inc., $12,152.16.

Cash is received from Lewis & Son in payment of their note of December 24, 19__, for $8,132.11, due today.

Check #71 to pay voucher #79.

FEBRUARY 24

Voucher #83, favor Rex Metal Works, for raw-material purchases, $11,889.97. (Enter this voucher with knowledge of voucher #84.)

Voucher #84, favor Northern Pacific Railway, for freight on purchases, $100.16. In accordance with the terms of purchase, one half of this freight bill is to be paid by the Rex Metal Works.

Check #72 to pay voucher #84.

FEBRUARY 25

	Invoice			*Cost*
Sales to:	#33	Dean, Witter & Company	$11,631.78	$8,063.13
	34	Elliott & Company, Inc.	9,042.93	5,946.66
	35	General Sales Company, Inc.	10,023.21	6,809.92
	36	Lewis & Son	10,082.36	8,450.42
	37	Doyle & Green, cash sale	3,111.24	2,001.02

Voucher #85, favor Pioneer Supply Company, for factory supplies, $1,005.60.

Miscellaneous scrap materials are sold for cash to the Weston Junk Company, $100.00.

Voucher #86, favor Union Hardware Company, for shop tools, $352.84.

FEBRUARY 27

Voucher #87, favor Metropolitan Auto Service, Inc., for automobile repairs, $66.07.

One of the delivery trucks, now 26 months old and originally costing $2,601.10, is traded in on a new model. The trade-in allowance received from the Wilson Motor Company is $500.00. The new truck is delivered today at an invoice cost of $2,560.00.

Check #73 to pay voucher #88.

Some of the merchandise returned by customers is not considered to be salable as new merchandise of our usual grade. This "returned" merchandise is withdrawn from finished goods stock and sold for cash on invoice #38 to Kenway & Robb for $2,500.00. Cost, $2,544.14.

Voucher #89, favor Adams & Buckner, for miscellaneous selling expenses, $141.25.

Voucher #90, favor city treasurer, for gas, electricity, and water, $1,138.40. Charge 4/5 to factory and 1/5 to general administrative expense.

Voucher #91, favor Sterling Oil Company, for gasoline and oil, $321.77.

FEBRUARY 28

Voucher #92, in favor of sundry salesmen, for traveling expense reports, $781.29.

Voucher #93, favor Western Union Telegraph Company, $101.24.

Voucher #94, favor Harris C. Graham, Cashier, to reimburse petty cash as follows:

450	Freight In	$11.07
760	Miscellaneous Selling Expense	12.73
790	Traveling Expense	15.00
840	Miscellaneous General Expense	21.07
850	Office Supplies	4.69
860	Postage	25.00
		$89.56

The payroll voucher, #95, for the period February 16–28, is distributed as follows:

501	Direct Labor	$16,774.16
620	Factory Repairs	1,842.04
650	Heat, Light, Power	152.00
660	Indirect Labor	8,905.12
680	Miscellaneous Factory Expense	588.01
720	Delivery Expense	500.15
780	Sales Salaries	760.00
801	Administrative Salaries	1,500.00
		$31,021.48

From this payroll there were required to be withheld from employees' checks income taxes of $4,893.80 and social security taxes (O.A.S.I.) of $620.43.

Checks #74–80 to pay voucher #92.

Check #81 to pay voucher #94.

A bill for 8% interest, for 21 days, on $27,165.41, is mailed to Carsten & Earles, covering their past-due account.

The board of directors declares a cash dividend of 1½% payable March 15 to stock of record, March 5.

End-of-the-Month Procedures

Adjusting entries should be placed on the books to record the information and directives described below.

1. Depreciation expense. Prorate depreciation expense as in January.
2. Property taxes. Prorate as in January.
3. Social security taxes, levied on the employer, on the February payroll:

O.A.S.I. tax,	2% × $56,608.86 =	$1,132.18
Unemployment tax,	3% × $56,608.86 =	1,698.27
		$2,830.45

   Payroll taxes should be allocated as in January.
4. Write off February apportionment of prepaid automobile license expense.
5. Accrue for interest on notes payable and the real-estate mortgage.
6. Expired insurance. Prorate insurance expense as in January.
7. Transfer the balances of accounts No. 450, Freight In, and No. 475, Purchases Discounts, to account No. 25, Raw Materials.
8. The raw-materials requisition register for February shows a total of $86,177.17 of raw materials requisitioned for use in manufacturing operations.
9. The factory supplies requisition register for February shows a total of $3,525.74 of factory supplies requisitioned for use in manufacturing operations.
10. Transfer the balance of account No. 501, Direct Labor, $32,257.23, to account No. 20, Work in Process.
11. Manufacturing expense has been charged to production orders at the rate of 95% of direct labor cost. The summary of manufacturing expense distributed for February shows a total of $30,644.37. This total is checked and found correct, i.e., 95% × $32,257.23 = $30,644.37.
12. The summary of completed production orders for February shows a total of $134,331.82.
13. Since all accounts receivable, December 31, 19__, have been collected, directors authorize the transfer of the balance in account No. 8, Allowance for Bad Debts, $18,223.17, to account No. 1150, Adjustment, Bad Debts Expense—Prior Years.
14. Because the Carsten & Earles account is giving evidence of weakness, the company's management authorizes a provision, for possible loss in collection, of 10% of the amount owed by this customer.
15. Total and post all books of original entry.
16. Prepare a trial balance, February 28, 19__.

Prepare a statement of income for the two months ended February 28, 19__, and a balance sheet, February 28, 19__. These financial statements should include provisions for income taxes. Income taxes are estimated as being approximately 50% of the company's net profit from operations. In

the financial statements, however, income taxes should appear at a value which has been rounded off to the nearest hundred-dollar value.

Supporting schedules for accounts receivable and vouchers payable should accompany the balance sheet.

PRACTICE SET NO. 6. MANUFACTURING CORPORATION

Blackwell Manufacturing Company, Inc.

The partnership of Blackstock & Wellman was a manufacturing business with a history of many years of successful operation. The partners decided to incorporate their business under the name of the Blackwell Manufacturing Company, Inc. Using a new set of books, the corporation commenced business as of January 1, 19__. The authorized capital stock of the new corporation was as follows:

Preferred stock, $100.00 par:	7%, cumulative, 3,000 shares
Common stock, no-par:	10,000 shares

Common stock was subscribed for at a price of $110.00 per share thus:

	Shares
Robert S. Allen	500
James D. Blackstock	4,500
Sumner H. Wellman	4,000
	9,000

The subscription of Robert S. Allen was paid in cash, $55,000.00. The subscriptions of Mr. Blackstock and Mr. Wellman were paid for by transferring to the corporation the net assets of the partnership, December 31, 19__, and additional cash of $57,160.72. The total cash received in payment of the subscriptions of Mr. Blackstock and Mr. Wellman was $177,537.92 (excluding petty cash of $200.00).

The balance of the partnership, December 31, 19__, was as follows:

Blackstock & Wellman

BALANCE SHEET, DECEMBER 31, 19__

Assets

Current Assets:		
Cash		$120,377.20
Petty Cash		200.00
Notes Receivable	$ 52,268.77	
Less Notes Receivable Discounted	28,194.53	24,074.24
Accounts Receivable	$269,752.17	
Less Allowance for Bad Debts	22,484.19	247,267.98
Inventories:		
Finished Goods	$241,916.22	
Work in Process	80,201.18	
Raw Materials	134,762.01	
Factory Supplies	3,796.49	460,675.90
		$852,595.32

Fixed Assets:

	Gross Value	*Allowance for Depreciation*	*Net Book Value*	
Automobiles	$ 32,234.11	$ 10,034.16	$ 22,199.95	
Buildings	150,000.00	37,500.00	112,500.00	
Furniture, Fixtures, and Office Equipment	15,324.69	3,762.48	11,562.21	
Machinery	171,414.65	48,001.63	123,413.02	
Tools	10,588.46	2,846.19	7,742.27	
Land	30,000.00		30,000.00	
	$409,561.91	$102,144.46	$307,417.45	307,417.45
				$1,160,012.77

Liabilities and Capital

Current Liabilities:

Withholding Income Taxes Payable		$ 9,874,16
Social Security Taxes Payable		16,653.96
Interest Payable—Mortgage		1,500.00
Interest Payable—Notes Payable		500.00
Notes Payable		100,000.00
Accounts Payable		103,645.37
		$232,173.49

Long-term Liabilities:

Mortgage Payable on real estate, 6%, due in 10 years, interest payable January 1 and July 1		50,000.00
		$282,173.49

Capital:

	P & L Ratio		
James E. Blackstock, Capital	60%	$465,979.11	
Sumner H. Wellman, Capital	40%	411,860.17	877,839.28
			$1,160,012.77

Supporting schedules to the above balance sheet are

NOTES RECEIVABLE

Date of Note	*Maker*	*Time*	*Rate of Interest*	*Amount*	*Discounted at Metropolitan National Bank on*
Dec. 1	Eastern Sales Company	120 days	6%	$28,194.53	Dec. 1
10	Carsten & Earles	30 days		14,039.44	
24	Lewis & Son	60 days		10,034.80	
				$52,268.77	

ACCOUNTS RECEIVABLE

Berg & Evans	$ 20,358.14
Carsten & Earles	15,095.36
Clemson Bros., Inc.	30,324.84
Dean, Witter & Company	82,511.76
Elliott & Company, Inc.	40,094.04
General Sales Company, Inc.	18,121.27
Harper-Harris Company	36,080.60
Lewis & Son	27,166.16
	$269,752.17

NOTES PAYABLE

Date of Note	*Payee*	*Time*	*Rate of Interest*	*Amount*
Dec. 31	Metropolitan National Bank	3 months	6%	$100,000.00

ACCOUNTS PAYABLE

Ne Page & Nelson	$ 14,826.20
Pioneer Supply Company	13,112.69
Rex Metal Works	17,340.77
Sears-Scott, Inc.	10,417.64
Terminal Sales Company	20,256.43
Union Hardware Company	12,744.99
Wallace Equipment Company	14,946.65
	$103,645.37

The following books of original entry are to be employed:

Sales book
Returned sales and allowances book
Voucher register
Cash receipts book
Check register
Notes receivable register
Journal

The Blackwell Manufacturing Company, Inc., adopted the numbered system of accounts described on pages 740–743.

JANUARY 1

Before the transactions below are recorded, the sale of 9,000 shares of common stock should be placed on the books from information recited above. Include cash in the journal entry recording the investments of Mr. Blackstock and Mr. Wellman. Fixed assets should be recorded at gross values; and accrued depreciation as of December 31, 19__, should be credited to allowance for depreciation accounts.

The accounts payable, in addition to being entered in the opening journal entry (as vouchers payable), should also be entered in the voucher register, beginning with Ne Page & Nelson as voucher #1, Pioneer Supply Company as voucher #2, and so on. The seven credits to Vouchers Payable should be offset by a single debit to account #140, Vouchers Payable, in the sundry distribution columns.

Balances for the eight accounts receivable accounts should be entered in customers' accounts in the subsidiary ledger.

The three notes receivable should be entered as memoranda in the notes receivable register.

The books of the Blackwell Manufacturing Company are to be kept on the monthly accrual basis of accounting, as described in Chapters 12, 13, and 23, adjusting entries being recorded on the books at the end of each month. The company expects to operate under a job order system of cost accounting and its inventories are to be maintained under the system of perpetual inventory.

Two controlling accounts are to be carried, one for accounts receivable and one for vouchers payable.

JANUARY 2

Voucher #8, favor James E. Blackstock, for organization expenses paid by him, $5,118.74. Drew check #1 in payment.

Voucher #9, favor state treasurer, for automobile license plates for next 12 months, $617.04. Drew check #2 in payment.

Voucher #10, in favor of sundry salesmen, for traveling advances, $2,000.00. Drew checks #3–9 in payment.

Voucher #11, favor John E. Davis, for six months' interest on mortgage, due today, $1,500.00. Drew check #10 in payment.

Voucher #12, favor General Insurance Agency, for insurance premiums on

Building (three years	$2,340.00
Inventories (one year)	3,000.00
Automobiles (one year)	504.00
Other personal property (one year)	1,500.00
	$7,344.00

JANUARY 3

Voucher #13, favor Bell Telephone Company, $46.28.

Voucher #14, favor Standard Office Supply Company, for office supplies, $380.17.

Voucher #15, favor Adams & Buckner, for miscellaneous selling expenses, $135.79.

Voucher #16, favor Pioneer Supply Company, for factory supplies, $1,119.21.

JANUARY 5

Voucher #17, favor Central Service Machinery Company, for factory repairs, $1,213.86.

Voucher #18, favor Sears-Scott, Inc., for raw-material purchases, $14,820.55.

Voucher #19, favor Northern Pacific Railway, for freight on purchases, $138.38.

Check #11 to pay voucher #19.

Check #12 to pay voucher #12.

Check #13 to pay voucher #13.

JANUARY 6

	Invoice			*Cost*
Sales to:	#1	Berg & Evans	$13,232.50	$11,124.20
	2	Carsten & Earles	9,753.13	8,312.99
	3	Dean, Witter & Company	8,603.09	7,239.80
	4	Elliott & Company, Inc.	11,165.44	9,478.28
	5	Harper-Harris Company	10,074.73	8,442.37

JANUARY 8

Voucher #20, favor Grebe & Gillette, for miscellaneous general expenses, $88.75.

Voucher #21, favor Chase & Chase, for miscellaneous factory expenses, $650.66.

JANUARY 9

Statements, December 31, 19__, received from creditors are found to be correct. Checks #14–20 are drawn in payment:

Voucher

#1	Ne Page & Nelson	$14,826.20, less 2%, or $14,529.68
2	Pioneer Supply Company	13,112.69, less 2%, or 12,850.44
3	Rex Metal Works	17,340.77, less 2%, or 16,993.95
4	Sears-Scott, Inc.	10,417.64, less 3%, or 10,105.11
5	Terminal Sales Company	20,256.43, less 2%, or 19,851.30
6	Union Hardware Company	12,744.99, less 2%, or 12,490.09
7	Wallace Equipment Company	14,946.65, less 2%, or 14,647.72

Received from Harper-Harris Company, note dated January 10, for 30 days, 6% interest, in payment of December account, $36,080.60.

JANUARY 10

Voucher #22, favor Pioneer Supply Company, for factory supplies, $1,244.02.

Received cash from Carsten & Earles for note of December 10 due today, $14,039.44.

Received checks in payment of December accounts receivable:

Berg & Evans	$20,358.14, less 2%, or $19,950.98
Clemson Bros., Inc.	30,324.84, less 2%, or $29,718.34
Dean, Witter & Company	82,511.76, less 2%, or 80,861.52
General Sales Company	18,121.27, less 2%, or 17,758.84
Lewis & Son	27,166.16, less 2%, or 26,622.84

JANUARY 11

Voucher #23, favor Wallace Equipment Company, for miscellaneous factory expenses, $531.80.

Check #21 to pay voucher #15.

Check #22 to pay voucher #17.

JANUARY 12

Issued credit memoranda for merchandise returned from sales of January 6:

			Cost
#1	Elliott & Company, Inc.	$1,260.52	$1,109.54
#2	Berg & Evans	964.26	802.30

Raw-material purchases from

Ne Page & Nelson	$15,447.08
Terminal Sales Company	16,119.63

Voucher #26, favor Northern Pacific Railway for freight on raw-material purchases, $214.88.

Check #23 to pay voucher #26.

JANUARY 13

	Invoice		*Cost*
Sales to:	#6	Clemson Bros., Inc.	$ 6,035.24	$ 4,759.84
	7	Dean, Witter & Company	11,826.31	10,027.69
	8	General Sales Company, Inc.	12,791.23	10,710.94
	9	Lewis & Son	15,277.51	13,177.90

JANUARY 15

Voucher #27, favor *Garfield Trade Register*, for advertising, $1,223.12.

Voucher #28, favor city treasurer, for fine imposed on one of our drivers for speeding, $50.00.

Check #24 to pay voucher #28.

JANUARY 16

Received credit memorandum from Terminal Sales Company for raw materials returned from purchase of January 12, $751.64.

Received from Elliott & Company, Inc., check for $30,094.04; and note for $10,000.00, dated January 10, for 30 days, without interest, in payment of December account.

JANUARY 17

Voucher #30, in favor of Payroll, for payroll for period January 1–15, inclusive. Two days are required for the preparation of the payroll; its distribution is as follows:

501	Direct Labor	$14,822.19
620	Factory Repairs	1,072.52
650	Heat, Light, Power	188.00
660	Indirect Labor	7,559.77
680	Miscellaneous Factory Expense	729.47
720	Delivery Expense	698.13
780	Sales Salaries	950.00
801	Administrative Salaries	1,500.00
		$27,520.08

From this payroll there were required to be withheld from employees' checks income taxes of $4,402.61 and social security taxes (O.A.S.I.) of $550.40.

Drew Check #25, in favor of Payroll—Blackwell Manufacturing Company, Inc., in payment of Voucher #30.

JANUARY 18

Voucher #31, favor Lowman, Rand, Inc., for miscellaneous selling expenses, $168.24.

Issued credit memorandum #3 to Lewis & Son for merchandise returned from sale of January 13, $1,008.76. Cost, $827.64.

JANUARY 19

Raw-material purchases from

Rex Metal Works	$44,361.49
Sears-Scott, Inc.	12,875.19

Voucher #34, favor Northern Pacific Railway, for freight on purchases, $381.44.

Check #26 to pay voucher #34.

JANUARY 20

			Invoice Cost	*Cost*
Sales to:	#10	Berg & Evans	$ 8,186.63	$ 6,912.03
	11	Carsten & Earles	11,936.11	10,048.20
	12	Dean, Witter & Company	14,851.33	12,606.59
	13	Elliott & Company, Inc.	8,724.37	7,411.38
	14	Lewis & Son	9,003.21	7,555.61

JANUARY 22

Voucher #35, favor Metropolitan Auto Service, Inc., for automobile repairs, $70.51.

Voucher #36, favor Moody & Jackson, for stationery and printing, $477.22.

JANUARY 23

Voucher #37, favor Pioneer Supply Company, for factory supplies, $1,374.79.

Voucher #38, favor Northern Pacific Railway, for freight on the Pioneer purchase, $25.12.

Voucher #39, favor George H. Mason Company, for miscellaneous general expense, $189.62.

Check #27 to pay voucher #38.

JANUARY 24

Received credit memorandum from Sears-Scott, Inc., for raw materials returned from purchase of January 19, $860.51.

Voucher #41, favor Central Service Machinery Company, for factory repairs, $972.48.

JANUARY 25

Issued credit memorandum #4 to Lewis & Son for merchandise returned from sale of January 13, $702.55. Cost, $588.30.

Voucher #42, favor Union Hardware Company, for miscellaneous factory expense, $729.59.

JANUARY 26

Raw-material purchase from Ne Page & Nelson, $9,485.96.

Voucher #44, favor Northern Pacific Railway, for freight on raw-material purchases, $148.94.

Check #28 to pay voucher #27.

Check #29 to pay voucher #36.

Check #30 to pay voucher #41.

Check #31 to pay voucher #44.

JANUARY 27

	Invoice			*Cost*
Sales to:	#15	Berg & Evans	$ 9,000.99	$ 7,650.84
	16	Carsten & Earles	11,832.88	10,081.48
	17	Dean, Witter & Company	10,073.38	8,401.66
	18	Elliott & Company, Inc.	12,831.84	9,752.77

JANUARY 29

Received from Harper-Harris Company, note dated January 11, due March 11, for $10,074.73, without interest, in payment of invoice of January 6.

Voucher #45, favor city treasurer, for gas, electricity, and water, $1,803.52. Charge 4/5 to factory, 1/5 to general administrative expense.

JANUARY 30

Voucher #46, favor *Garfield Trade Register*, for advertising, $1,891.04.

Voucher #47, favor Sterling Oil Company, for gasoline and oil, $460.88.

JANUARY 31

Voucher #48, in favor of sundry salesmen, for traveling expense reports, $845.28.

Voucher #49, favor Western Union Telegraph Company, $159.75.

Voucher #50, favor Harris C. Graham, Cashier, to reimburse petty cash as follows:

760	Miscellaneous	$17.30
790	Traveling Expense	11.33
840	Miscellaneous General Expense	15.54
850	Office Supplies	5.96
860	Postage	25.00
870	Stationery and Printing	20.00
		$95.13

The voucher register is kept open until the summary of the payroll for the period January 16–31 is ready. The payroll voucher, #51, is distributed as follows:

501	Direct Labor	$22,941.09
620	Factory Repairs	1,555.75
650	Heat, Light, Power	188.00
660	Indirect Labor	11,045.45
680	Miscellaneous Factory Expense	650.66
720	Delivery Expense	788.50
780	Sales Salaries	1,000.00
801	Administrative Salaries	1,700.00
		$39,869.45

From this payroll there were required to be withheld from employees' checks income taxes of $6,877.81 and social security taxes (O.A.S.I.) of $797.39.

Checks #32–38 to pay voucher #48.

Check #39 to pay voucher #50.

Liabilities representing withholding income taxes payable, $9,874.16, and social security taxes payable, $16,653.96, December 31, 19__, are paid.

Issued voucher #52 and check #40 in favor of the director of internal revenue, $13,161.55; and voucher #53 and check #41 in favor of the state treasurer, $13,366.57. The check in favor of the state treasurer represents unemployment taxes relating to the payroll for the year ended December 31, 19__; it is 90% × $14,851.74, or $13,366.57.

End-of-the-Month Procedures

Adjusting entries should be placed on the books to record the information and directives described below.

1. Depreciation expense. Annual depreciation rates are

Automobiles	30%
Buildings	3
Furniture, Fixtures, and Office Equipment	10
Machinery	10
Tools	33⅓

   Depreciation expense on the building is to be allocated as being factory expense, 90%, and general administrative expense, 10%.
2. Property taxes. Property taxes for the past calendar year were $12,524.76. Property taxes are to be allocated as being factory expense, 7/8, and general administrative expense, 1/8.
3. Social security taxes, levied on the employer, on the January payroll:

O.A.S.I. tax,	2% × $67,389.53 =	$1,347.79
Unemployment tax,	3% × $67,389.53 =	2,021.69
		$3,369.48

   Payroll taxes are to be allocated as being manufacturing expense, selling expense, and general expense, in proportion to the distribution of the January payroll over the classifications of manufacturing, selling, and general expense, respectively.
4. Write off January apportionment of prepaid automobile license expense.
5. Accrue for interest on notes receivable.
6. Accrue for interest on notes payable and the real-estate mortgage.
7. Expired insurance. Allocate insurance expense on
   Buildings: manufacturing, 90%; general administrative, 10%.
   Inventory: manufacturing, 50%; general administrative, 50%.
   Other personal property: manufacturing, 90%; general administrative, 10%.
8. Transfer the balances of accounts No. 450, Freight In, and No. 475, Purchases Discounts, to account No. 25, Raw Materials.
9. The raw-materials requisition register for January shows a total of $107,860.53 of raw materials requisitioned for use in manufacturing operations.
   (*Note:* In the stores ledger separate accounts are maintained for Freight In and Purchases Discounts. The Freight In account is

credited monthly for the amount of freight applicable to raw materials issued; and Purchases Discounts is debited for an amount which will reduce this account to zero at the end of the month. The credit to Freight In and the debit to Purchases Discounts are included in the total of $107,860.53 for the raw-materials requisition register.)

10. The factory supplies requisition register for January shows a total of $3,816.65 of factory supplies requisitioned for use in manufacturing operations. Debit account No. 640, Factory Supplies, credit account No. 30, Factory Supplies.
11. Transfer the balance of account No. 501, Direct Labor, $37,763.28, to account No. 20, Work in Process.
12. Manufacturing expense has been charged to production orders at the rate of 95% of direct labor cost. The summary of manufacturing expense distributed for January shows a total of $35,875.12. This total is checked and found correct, i.e., 95% × $37,763.28 = $35,875.12. Debit account No. 20, Work in Process, credit account, No. 601, Manufacturing Expense Applied.
13. The summary of completed production orders for January shows a total of $169,111.38. Debit account No. 10, Finished Goods, credit account No. 20, Work in Process.
14. Total and post all books of original entry. The Cost of Sales column in the sales book should be posted as a debit to account No. 350, Cost of Sales, and as a credit to account No. 10, Finished Goods.
15. Prepare a trial balance, January 31, 19__.

Prepare a statement of income for the month ended January 31, 19__, and a balance sheet, January 31, 19__. These financial statements should include provisions for income taxes. Income taxes are estimated as being approximately 50% of the company's net profit from operations. In the financial statements, however, income taxes should appear at a value which has been rounded off to the nearest hundred-dollar value.

Supporting schedules for accounts receivable and vouchers payable should accompany the balance sheet.

FEBRUARY 1

(In the entry of transactions for February, use new pages for the books of original entry.)

Voucher #54, favor Bell Telephone Company, $63.11.

Voucher #55, favor Moody & Jackson, for printing office and factory forms, $180.00. Apportion 2/3 to factory, 1/3 to general administrative expense.

FEBRUARY 2

Voucher #56, favor Chase & Chase, for miscellaneous factory expenses, $508.42

Voucher #57, favor Belmont & Keen, for miscellaneous general expenses, $208.74.

Check #42 to pay voucher #51.

FEBRUARY 3

Raw-material purchases from

Ne Page & Nelson	$20,327.45
Terminal Sales Company	10,923.60

Voucher #60, favor Northern Pacific Railway, for freight on purchases, $193.39.

Check #43 to pay voucher #60.

FEBRUARY 4

	Invoice			*Cost*
Sales to:	#19	Berg & Evans	$10,172.54	$ 7,750.01
	20	Clemson Bros., Inc.	12,737.84	10,890.01
	21	Dean, Witter & Company	10,912.31	9,309.02
	22	Harper-Harris Company	9,812.28	8,271.69

FEBRUARY 6

Check #44 to pay Voucher #54.

Voucher #61, favor Central Service Machinery Company, for factory repairs, $232.64.

FEBRUARY 7

Issued credit memorandum #5 to Clemson Bros., Inc., for merchandise returned from sale of February 4, $1,134.35. Cost, $937.72.

Voucher #62, favor Pioneer Supply Company, for factory supplies, $985.16.

FEBRUARY 8

Received from Harper-Harris Company note dated February 4, and due March 10, for $9,812.28, without interest, in payment of invoice of February 4.

Voucher #63, favor *Garfield Trade Register*, for advertising, $1,562.82.

FEBRUARY 9

Statements, January 31, received from creditors are found to be correct. Checks are drawn in payment as follows:

Check #	*To pay Voucher #*	*Amount of Check*
45	14	$ 380.17
46	16, 22, 37, all less 2%	3,663,29
47	18, 40, both less 3%	26,030.17
48	20	88.75
49	21	650.66
50	23	531.80
51	24, 43, both less 2%	24,434.37
52	29, less 2%	15,060.63
53	31	168.24
54	32, less 2%	43,474.26
55	35	70.51
56	39	189.62
57	42, less 2%	715.00
58	45	1,803.52
59	46	1,891.04
60	47	460.88
61	49	159.75

A check, $36,261.00, is received from Harper-Harris Company in payment of its note of January 10, $36,080.60, and 6% interest.

Cash is received from Elliott & Company, Inc., in payment of its note of January 10, $10,000.00.

FEBRUARY 10

Received checks in payment of January accounts:

Berg & Evans	$29,455.86, less 2%, or	$28,866.74
Carsten & Earles, for December account	15,095.36, net	
Clemson Bros., Inc.	6,035.24, less 2%, or	5,914.54
Dean, Witter & Company	45,354.11, less 2%, or	44,447.03
Elliott & Company, Inc.	31,461.13, net	
General Sales Company, Inc.	12,791.23, less 2%, or	12,535.41
Lewis & Son	22,569.41, less 2%, or	22,118.03

Raw-material purchase from Ne Page & Nelson, $9,874.45.

Voucher #65, favor Northern Pacific Railway, for freight on purchases, $145.71.

Check #62 to pay voucher #65.

Voucher #66 and check #63 in favor of the Metropolitan National Bank, $13,976.00, in payment of withholding income taxes, January 31, 19__, $11,280.42, and O.A.S.I. taxes payable, January 31, 19__, $2,695.58. This bank is an authorized depositary of the Internal Revenue Service.

FEBRUARY 11

	Invoice			*Cost*
Sales to:	#23	Carsten & Earles	$ 8,043.01	$ 6,562.47
	24	Dean, Witter & Company	15,566.07	13,338.52
	25	Elliott & Company, Inc.	10,394.74	8,020.07
	26	General Sales Company, Inc.	10,767.70	6,403.33
	27	Harper-Harris Company	14,366.43	11,203.59

Voucher #7, favor Northern Pacific Railway, $99.98. By agreement this freight bill is to be paid by Harper-Harris Company, for whose account the payment is made by check #64.

FEBRUARY 13

Received credit memorandum from Ne Page & Nelson for raw materials returned from purchase of February 10, $874.24.

Terminal Sales Company offers 1% extra discount on its bill of February 3 if payment is made within 10 days. Check #65 to pay voucher #59, less 3%, or $10,595.89.

FEBRUARY 14

Voucher #69, favor Lowman, Rand, Inc., for miscellaneous selling expenses, $147.18.

Credit is requested by, and granted to, Elliott & Company, Inc., for 2% sales discount on its remittance of February 10 for $31,461.13. Credit memorandum #6, $629.22.

Check #66 to pay voucher #62, net.

FEBRUARY 15

Voucher #70, favor Pioneer Supply Company, for factory supplies, $1,058.66.

Voucher #71, favor Northern Pacific Railway for freight on Pioneer purchase, $23.16.

Check #67 to pay voucher #71.

FEBRUARY 16

Issued credit memorandum #7 to Elliott & Company, Inc., for merchandise returned from sale of February 11, $246.92. Cost, $201.71.

Voucher #72, favor Wallace Equipment Company, for miscellaneous factory expenses, $525.19.

FEBRUARY 17

Raw-material purchases from

Rex Metal Works	$32,617.17
Sears-Scott, Inc.	23,930.63

Voucher #75, favor Northern Pacific Railway, for freight on purchases, $355.61.

Voucher #76, in favor of Payroll for payroll for period February 1–15, inclusive. Its distribution is as follows:

501	Direct Labor	$18,489.11
620	Factory Repairs	446.92
650	Heat, Light, Power	187.57
660	Indirect Labor	8,473.75
680	Miscellaneous Factory Expense	757.68
720	Delivery Expense	722.00
780	Sales Salaries	950.00
801	Administrative Salaries	1,600.00
		$31,627.03

From this payroll there were required to be withheld from employees' checks income taxes of $5,676.60 and social security taxes (O.A.S.I.) of $632.54.

Check #68 to pay voucher #75.

Check #69 to pay voucher #76.

FEBRUARY 18

	Invoice			*Cost*
Sales to:	#28	Berg & Evans	$15,088.29	$10,344.03
	29	Clemson Bros., Inc.	11,017.60	9,429.12
	30	Elliott & Company	10,078.44	7,532.22
	31	Harper-Harris Company	12,636.10	9,963.61
	32	General Sales Company, Inc., shipment made today, terms sight draft	18,995.77	13,363.41

FEBRUARY 20

Received an accepted 30-day time draft from Carsten & Earles for $8,043.01, without interest, dated February 11, covering our shipment of that date.

Voucher #77, favor Moody & Jackson, for promotional sales catalogs, $500.00.

Voucher #78, favor Carr & Wright, for miscellaneous general expenses, $89.64.

FEBRUARY 21

Check #70 to pay voucher #63.

Issued credit memorandum #8 to Berg & Evans for merchandise returned from sale of February 18, $659.30. Cost, $561.82.

Voucher #79, favor Central Service Machinery Company, for factory repairs, $722.28.

FEBRUARY 22

Voucher #80, favor Union Hardware Company, for miscellaneous factory expense, $493.07.

Voucher #81, favor Standard Office Supply Company, for office supplies, $342.16.

FEBRUARY 23

Voucher #82, favor *Garfield Trade Register*, for advertising, $1,335.51.

Collected cash on sight draft shipment of February 18 to the General Sales Company, Inc., $18,995.77.

Cash is received from Lewis & Son in payment of their note of December 24, 19__, for $10,034.80, due today.

Check #71 to pay voucher #79.

FEBRUARY 24

Voucher #83, favor Rex Metal Works, for raw-material purchases, $14,672.22. (Enter this voucher with knowledge of voucher #84.)

Voucher #84, favor Northern Pacific Railway, for freight on purchases, $123.60. In accordance with the terms of purchase, one half of this freight bill is to be paid by the Rex Metal Works.

Check #72 to pay voucher #84.

FEBRUARY 25

	Invoice			*Cost*
Sales to:	#33	Dean, Witter & Company	$13,638.82	$ 9,949.90
	34	Elliott & Company, Inc.	10,444.18	7,338.18
	35	General Sales Company, Inc.	12,900.64	8,444.14
	36	Lewis & Son	13,441.63	10,574.62
	37	Doyle & Green, cash sale	3,111.24	2,001.02

Voucher #85, favor Pioneer Supply Company, for factory supplies, $1,240.91.

Miscellaneous scrap materials are sold for cash to the Weston Junk Company, $100.00.

Voucher #86, favor Union Hardware Company, for shop tools, $435.40.

FEBRUARY 27

Voucher #87, favor Metropolitan Auto Service, Inc., for automobile repairs, $81.53.

One of the delivery trucks, now 26 months old and originally costing $2,601.10, is traded in on a new model. The trade-in allowance received from the Wilson Motor Company is $600.00. The new truck is delivered today at an invoice cost of $2,560.00.

Check #73 to pay voucher #88.

Some of the merchandise returned by customers is not considered to be salable as new merchandise of our usual grade. This "returned" merchandise is withdrawn from finished goods stock and sold for cash on invoice #38 to Kenway & Robb for $3,000.00. Cost, $3,114.79.

Voucher #89, favor Adams & Buckner, for miscellaneous selling expenses, $149.62.

Voucher #90, favor city treasurer, for gas, electricity, and water, $1,404.81. Charge 4/5 to factory and 1/5 to general administrative expense.

Voucher #91, favor Sterling Oil Company, for gasoline and oil, $404.60.

FEBRUARY 28

Voucher #92, in favor of sundry salesmen, for traveling expense reports, $964.11.

Voucher #93, favor Western Union Telegraph Company, $122.46.

Voucher #94, favor Harris C. Graham, Cashier, to reimburse petty cash as follows:

450	Freight In	$ 1.32
760	Miscellaneous Selling Expense	15.71
790	Traveling Expense	6.17
840	Miscellaneous General Expense	26.00
850	Office Supplies	5.79
860	Postage	35.00
		$89.99

The payroll voucher #95, for the period February 16–28 is distributed as follows:

501	Direct Labor	$18,848.31
620	Factory Repairs	1,016.87
650	Heat, Light, Power	188.00
660	Indirect Labor	9,137.92
680	Miscellaneous Factory Expense	725.60
720	Delivery Expense	684.92
780	Sales Salaries	950.00
801	Administrative Salaries	1,800.00
		$33,351.62

From this payroll there were required to be withheld from employees' checks income taxes of $5,960.01 and social security taxes (O.A.S.I.) of $667.03.

Checks #74–80 to pay voucher #92.

Check #81 to pay voucher #94.

Voucher #96, in favor of Metropolitan National Bank, for note payable due today.

Check #82 to pay voucher #96.

A bill for 8% interest, for 21 days, on $33,522.12, is mailed to Carsten & Earles, covering their past-due account.

The board of directors declares a cash dividend of $1.00 per share on the common stock, payable March 15 to stock of record, March 5.

End-of-the-Month Procedures

Adjusting entries should be placed on the books to record the information and directives described below.

1. Depreciation expense. Prorate depreciation expense as in January.
2. Property taxes. Prorate as in January.
3. Social security taxes, levied on the employer, on the February payroll:

O.A.S.I. tax,	2% × $64,978.65 =	$1,299.57
Unemployment tax,	3% × $64,978.65 =	1,949.36
		$3,248.93

   Payroll taxes should be allocated as in January.
4. Write off February apportionment of prepaid automobile license expense.
5. Accrue for interest on the real-estate mortgage.
6. Expired insurance. Prorate insurance expense as in January.
7. Transfer the balances of accounts No. 450, Freight In, and No. 475, Purchases Discounts, to account No. 25, Raw Materials.
8. The raw-materials requisition register for February shows a total of $106,342.63 of raw materials requisitioned for use in manufacturing operations.
9. The factory supplies requisition register for February shows a total of $4,350.76 of factory supplies requisitioned for use in manufacturing operations.
10. Transfer the balance of account No. 501, Direct Labor, $37,337.42, to account No. 20, Work in Process.
11. Manufacturing expense has been charged to production orders at the rate of 95% of direct labor cost. The summary of manufacturing expense distributed for February shows a total of $35,470.55. This total is checked and found correct, i.e., 95% × $37,337.42 = $35,470.55.
12. The summary of completed production orders for February shows a total of $165,765.44.
13. Since all accounts receivable, December 31, 19__, have been collected, directors authorize the transfer of the balance in account No. 8, Allowance for Bad Debts, $22,484.19, to account No. 1150, Adjustment, Bad Debts Expense—Prior Years.
14. Because the Carsten & Earles account is giving evidence of weakness, the company's management authorizes a provision, for possible loss in collection, of 10% of the amount owed by this customer.
15. Total and post all books of original entry.
16. Prepare a trial balance, February 28, 19__.

Prepare a statement of income for the two months ended February 28, 19__, and a balance sheet, February 28, 19__. These financial statements should include provisions for income taxes. Income taxes are estimated as being approximately 50% of the company's net profit from operations. In the financial statements, however, income taxes should appear at a value which has been rounded off to the nearest hundred-dollar value.

Supporting schedules for accounts receivable and vouchers payable should accompany the balance sheet.

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trading: clearing accounts in which are gathered together the components of gross profit. Trading accounts are rarely used today.
valuation: an account whose balance is to be interpreted as a deduction from the balance in some other related asset or equity account.

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ACCRUED ASSETS AND LIABILITIES: those which increase steadily in amount day by day. *See also* EXPENSE, accrued; INCOME, accrued

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BILL OF EXCHANGE: same as DRAFT.
BILL OF LADING: a receipt and contract issued by a common carrier for goods received which are to be delivered to a consignee as named in the bill of lading. On a "straight" bill of lading title passes to the buyer at the time the bill of lading is issued. On an "order" bill of lading title remains in the shipper until the bill of lading is endorsed and delivered to the buyer. The common carrier delivers the merchandise upon surrender of the order bill of lading by the person specified in the bill of lading or his endorsee.
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single entry: in theory that bookkeeping wherein books are kept with persons only. Usually, however, a cash account (in the form of a cash book) is also kept.
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B.T.A.: Board of Tax Appeals (now Tax Court)
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BURDEN. *See* MANUFACTURING EXPENSE
BY-LAWS: rules adopted by authority of stockholders for the guidance of officers and directors in the internal management of a corporation.

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CHECK: a bill of exchange payable on demand and drawn by a depositor upon his bank. A cashier's check is a check drawn by a bank against itself.
CHECK REGISTER, 441, 444
C.I.F.: cost, insurance, and freight. "C.I.F. destination" means that the seller absorbs cost, insurance, and freight to destination of shipment. "C.I.F. shipping point" means that the purchaser absorbs the charges.
C.J.: Corpus Juris.
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C.O.D.: cash on delivery, i.e., payment is required upon delivery of goods.
COMMERCIAL BILL: a draft to which a bank is not a party.
COMMON STOCK. *See* STOCK, CAPITAL, common
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CREDITOR: one to whom money is owed.

DEBIT
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DEBTOR: one who owes money to a creditor.
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DEFERRED INCOMES, 628. *See also* INCOME, deferred
DEFICIENCY: the amount by which total liabilities exceed total assets.
DEFICIT, 416. When the net worth of a corporation is less than the amount of the credit balance for outstanding capital stock, the difference is a deficit.
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bank: checks which have been drawn by a bank against its deposits in other banks.
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F.I.C.A.: Federal Insurance Contributions Act.
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FOLIO COLUMN, 34
FOOTING: the process of obtaining the sum of a column of figures.
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FUND
defined: assets (usually cash and securities) set aside for a specific purpose.
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FUNDED DEBT: the debt of a corporation which is represented by outstanding bonds payable.
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INVOICE
defined: an itemized bill prepared by the seller for the buyer. It shows terms of sale, quantities, description of items, prices, total of sale, and other important information. The bill is a "sales invoice" to the seller and a "purchases invoice" or "bill" to the buyer.
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JOURNALIZING: the debit and credit members of a journal entry.

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L.C.L.: less than car load.
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contingent
defined: liabilities, growing out of past business transactions, which materialize only by the happening of certain events.
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MARKDOWNS: deductions which reduce the originally established retail selling prices for merchandise.
MARKUPS: additions to originally established retail selling prices for merchandise.
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MEMORANDUM, DEBIT OR CREDIT: a written memorandum which describes a debit or credit made to the account of the recipient of the memorandum.
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ON ACCOUNT: on open credit basis.
OPEN ACCOUNT: a term used to describe shipments made on the general credit of the purchaser.
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OVERHEAD, FACTORY: same as MANUFACTURING EXPENSE.

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